

# THE AUTOMOBILE

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No. 13

## THE ELIMINATION TRIALS IN LONG ISLAND.

**D**RIVING his car at better than a mile-a-minute pace for the entire last round, B. F. Dingley swept over the finish line in the Vanderbilt cup race elimination trials in the Pope-Toledo racer at 7:32:50 o'clock last Saturday morning.

Then there were a few minutes of suspense.

"If" his most dangerous rival for honors the big Locomobile, driven by Tracy, arrived within six minutes, Dingley would get second place.

In the grandstand and the press stand and in the little groups by the roadside,

men held their watches in hand, glancing at the dials and then down the road.

Slowly the minutes expired. "Tracy has passed Hyde Park Corner," cried the announcer. Could he arrive in the brief time that remained? Over the edge of the slope in the distance came the big white "5," moving like a fury, making a vicious skid as if in protest as it came abreast the picket fence before the stand.

Too late. The six minutes had passed and a seventh lacked but a second when Tracy rushed over the line. Dingley was the winner by just 59 seconds. It was a grand finish, all things considered, in the

most successful road race ever held in this country. Successful in that no one was killed nor even seriously hurt, and because the American-built car had demonstrated its right to be seriously considered in a road race of the first importance.

Tracy finished at 7:39:49 o'clock. Frank Nutt, in the Haynes, crossed the line at 7:53:32 o'clock; Jardine, in the Royal Tourist, at 8:01:18 o'clock, and Roberts, in the Thomas, at 8:13:40 o'clock. Then the trials were called off with the Christie car still running, though hopelessly out of the race.

Figuring on the basis of elapsed time,

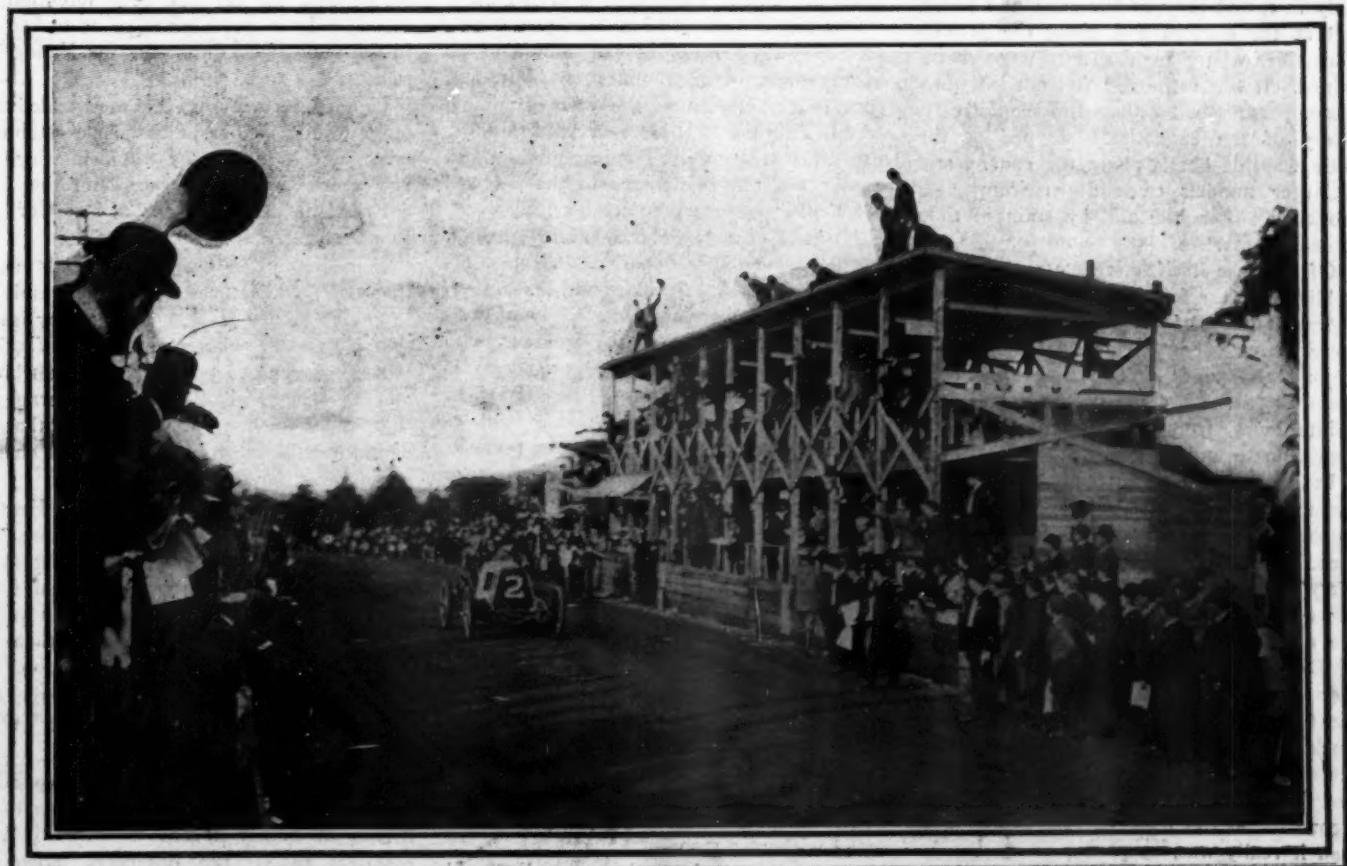


Photo Copyright 1905, by Edwin Levick.

DINGLEY IN THE POPE-TOLEDO CROSSING THE FINISH LINE AND WINNING THE VANDERBILT CUP ELIMINATION TRIALS.

the order of those who finished was Dingley, in the Pope-Toledo, first; Tracy, in the Locomobile, second; Jardine, in the Royal Tourist, third; Nutt, in the Haynes, fourth, and Roberts, in the Thomas, fifth.

Starting at 5:30 A.M., at the break of day, the trials were over and everyone started for home soon after 8 o'clock. Up to the morning of the race there was some uncertainty as to the number of cars out of the twelve entered that would come to the line. All but two started. One of the Matheson cars (No. 10) did not leave the temporary quarters at Mineola Saturday morning. The other absentee was the Premier air-cooled racer, No. 11, which had not been shipped from the factory at Indianapolis.

Weather conditions were perfect. The morning was fine and not too cold. As day broke, the sun came out and pleasantly warmed the autumn air, dissipating the little fog that hung over the low places on the course and putting a cheerful look on the landscape. After the recent heavy rains the road was in good condition, only a short stretch in the depths of the Guinea Woods being soft and pasty.

Though the start had been set for 5 o'clock, there was not light enough for safety until half an hour later, when the first car was sent away, the others getting off at two-minute intervals until the last at 5:48 A.M.

As one would expect, the number of spectators was not large as at the last Vanderbilt race, yet there were many about, not only in the vicinity of the start and finish, but at the corners and along the Jericho Turnpike, where high speeds were maintained. It was estimated that not less than 20,000 persons had gathered to see the race. Many of the enthusiasts stopped at the little wayside hotels along the course, and a larger number came down from New York by automobile and by train in time to see the start.

Of the race itself, complete accounts are published in the following pages, written by representatives of *THE AUTOMOBILE*, who were stationed at various vantage points around the course. The times given by them as to the passage of the cars at the points away from the timers' stand are approximate and unofficial.

In general, the arrangements for holding the race were well carried out. The various officials were on their stations on time, and made a conscientious effort to carry out their instructions. The most serious error of the day was the mistake of the official timers in announcing the time of Dingley's first round two minutes less than it actually was. This did not affect the final result, however, for the correct clock time was announced on the completion of the second round, which, however, had the effect of making it appear that his second round was made two minutes slower than it really was.

Two features of the race stand prominently out of the general mass of results. One is the splendid performance of the



TRACY IN LOCOMOBILE FINISHING IN SECOND PLACE—FLAGGED BY GILLETTE.

touring car models, of which the Royal and the Haynes were representative, and the other is the magnificent record made by the American tires. The Haynes 40-horsepower touring car maintained an average speed of 47.44 miles an hour throughout the race, and more than 50 miles an hour in the last round. It would probably have made a non-stop run had not an oil can become entangled in the flywheel and lubricated the clutch, compelling a brief stop.

The Royal Tourist of 40 horsepower covered the 113.2 miles of the course at an average rate of 48.79 miles an hour, and covered one round at the rate of almost 51 miles an hour. It also survived the mishap of unexpectedly turning turtle on a corner with slight damage to the car and practically no injury to its occupants.

Mishaps eliminated the White steamer, Lytle's six-cylinder Pope-Toledo, the eight-cylinder air-cooled Franklin and the Matheson 40-horsepower gasoline car. The Christie in the hands of a plucky amateur, who had had no road racing experience, was practically eliminated, though running when the race was called off.

The tire record was still more remarkable. Not a single blowout or puncture was reported by any of the starters with the single exception of the Christie, which had tire troubles at Jericho on the first time around. Considering that both car and driver were practically untried in road work, and that the car is of a new and unusual construction, it would not be fair to charge this mishap to defective tires on such circumstantial evidence.

An examination of the tires of Tracy's Locomobile after the race did not disclose even a scratch, though this car is quite up to the weight limit and was driven at high speed without a stop.

This car was about the most discussed after the race. Among the cognoscenti at the start and finish, its defeat by a margin

of only 59 seconds was described as a serious tactical blunder. "In a national contest, second place is about as valuable as second place in a presidential election," was the way one close follower of auto racing put it. It was pretty generally agreed that it was a case of bad coaching, and that the driver should have been warned in season to make a faster finish.

On the other side, however, it was asserted that the car had been intentionally driven only to get a place so as to keep it in the pink of condition for the Vanderbilt race.

Dingley in winning the race added another to the honors of the Pope establishment, which include an unofficial third in last year's Vanderbilt race, and the only finish of an American car in any Gordon-Bennett race.

Immediately following the trials came the usual conjectures as to the result of the final race. It was recalled by some that Heath, the winner of the last Vanderbilt race, averaged only 52.2 miles an hour, and as Dingley had made an average of 56.54 miles an hour, it was argued that he would at this rate stand an excellent chance of winning the 1905 event.

It was forgotten, however, that Heath's average was figured on elapsed time, excluding controls, and as he had long stops on account of tire troubles, his actual average when running must have been much higher. In his fastest round, Heath averaged 67.2 miles an hour. Then, too, the cup race was over 302.4 miles, while the elimination trials were only over 113.2 miles of road.

After the races Mr. Vanderbilt expressed the opinion that the cars would have to be driven at higher speeds to win. It was manifest to all the observers, however, that all the drivers in the trials on Saturday were nursing their cars and that several

notches were in reserve for the day of the actual race.

Following is a list of the officials who had charge of the trials and who will also officiate at the Vanderbilt race on October 14:

The William K. Vanderbilt cup race Commission for 1905 consists of the Racing Board of the American Automobile Association, the members of which are as follows: Robert Lee Morrell, chairman; William K. Vanderbilt, Jr., H. L. Bowden, E. R. Thomas, James L. Breese, E. H. R. Green, W. C. Temple, T. H. Hilliard, George L. Weiss, R. Lincoln Lippitt, George Isham Scott, F. C. Donald, William Wallace, S. M. Butler, A. L. Riker, E. T. Birdsall, R. H. White and A. G. Batchelder, secretary of the A. A. A. Referee, William K. Vanderbilt, Jr.; assistant referee, A. R. Pardington. Judges of

start and finish, Elliott C. Lee, Dave Hennen Morris, Alfred Wilmuth and L. R. Speare. Judges of weighing-in, A. L. Riker, E. T. Birdsall, R. H. White and S. A. Miles. Timers, the Chronograph Club of Boston and the Timers Club of New York. Starter, F. J. Wagner. Clerk of the course, F. G. Webb. Assistants to starter and clerk, C. H. Gillette, G. E. Farrington, Emerson Brooks and A. J. Picard. Judges at turns, members of the Brooklyn Motorcycle Club. Announcer, Peter Prunty. Engineer of the course, Lieut.-Com. W. G. Ford, C.E. Special motorcycle patrol, Brooklyn Motorcycle Club. Press bureau, Lawrence Abraham, Louis R. Smith and Richard Mann. Superintendent of grandstand, Alfred Reeves. Superintendent of telephone system, R. H. Burcher. Publishers of program, THE AUTOMOBILE, New York.

## Each Car's Race Performance.

**No. 1, Haynes, 50 horsepower**, driven by Nutt. At 2:25 o'clock the motor of the Haynes car, which stood on the line, was started up and seemed to run with great regularity and smoothness. Nutt chatted pleasantly with Gillette and Wagner and appeared to be quite composed, though this was his first essay in road racing. As the last few seconds were called off, blue smoke curled up from the side exhaust pipes, and in the gray of the morning little jets of flame marked the starting line for those at a distance. Nutt started well, getting into high gear quickly and dashing away toward Jericho amid a great cloud of smoke. This car made a remarkable showing, considering that it is a duplicate of the 1906 stock touring car, and that the driver had been over the course only three times previously. He would probably have made a non-stop run only that on the second round an oil can got mixed up in the flywheel and lubricated the clutch. A stop was necessary to wash off the clutch and prevent slipping. His fastest round was the last, in which the car averaged 50.58 miles an hour. Finished in fourth place running well at 7:53:32 o'clock.

**No. 2, 60-horsepower Pope-Toledo**, driven by Dingley. No driver made a better impression than Dingley when at the line ready to start. He sat very quietly behind the wheel, after shaking hands with Manager Keeton, and got off smoothly without any spectacular jump. From the open side of the bonnet flames spouted from the exhaust pipes, but little smoke. Dingley drove the fastest round in the race, his first being made at the rate of 60.71 miles an hour. His average for the race was 56.54, but the actual speed was fractionally faster, as he had a stop of about two minutes on the third round, stalling his motor at the turn in the Guinea Woods. This was no doubt caused by the handicap of having only two speeds, the car being the original one driven by him in the 1905

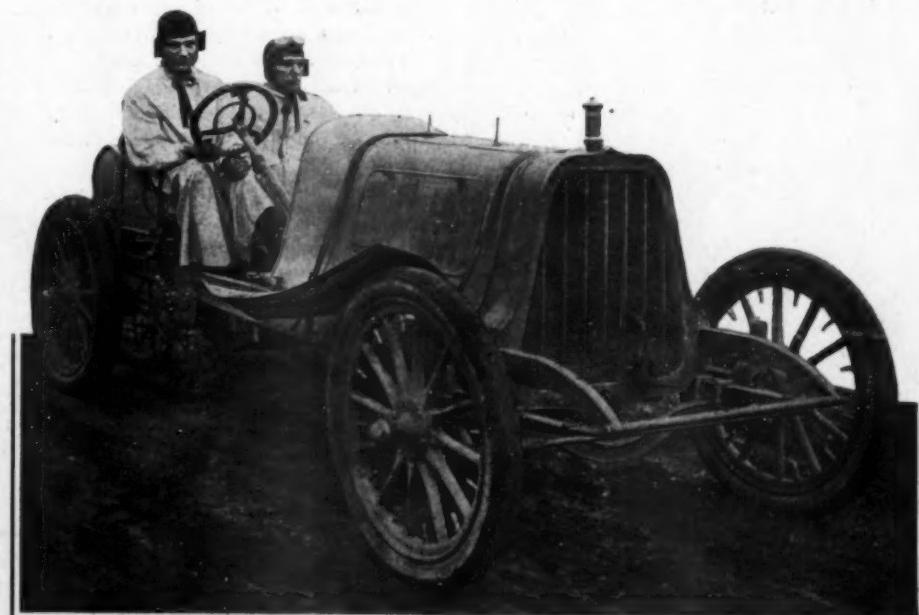
Gordon Bennett race. Finished in first place at 7:32:50 o'clock.

**No. 3, 40-horsepower Matheson**, driven by Mongini. As his name might indicate, this driver had a decidedly foreign appearance. With clean-cut features, dark complexion and bristling mustache, he looked the part of the daring driver, and his poor showing, owing to the sticking of his motor in the first round, was sympathetically discussed later in the day. The car was stripped to the buff, and had a hood partly formed of canvas. The motor turned over very quietly, without smoke or flame, and sounded as though the muffler was attached. When he got the word to "go" at 5:34 o'clock, Mongini made a momentary halt, as though the clutch slipped, and then rushed away at a great rate of speed. He was the only starter who did not finish a round, and was reported later as laid out in

the vicinity of Jericho with a sticking piston, due to defective lubrication. The car had reached the course only the day before, and was not really tuned up.

**No. 4, White steamer**, driven by Walter White. This car was the dark horse of the race, and from the track performances of the same type of machine, much was expected from it. Those who had not much faith in the steamer proposition were met by the statement that a Serpollet steam car had made a splendid showing in one of the French G. B. elimination trials. The low-hung car with the wedge-shaped fore-body looked fast as it crept silently to the line, and a little cloud of hissing steam blowing out from underneath gave an immediate impression of bottled-up energy. White and his mechanician both looked rather drawn and nervous, the driver especially. He watched his gauges closely as the seconds were called off, and at 5:36, when the word "go" was roared in his ear, the car seemed to plunge forward for several lengths. Then there was an ominous crash, like the noise made when a gasoline car driver engages gears with the clutch in, a flash of flame from below, as if from a sudden back-draft, and the racer came to a stop. Many who saw it exclaimed, "He started with his brakes on!" It seemed to others a case of too sudden opening of the throttle before the car had gathered speed. The car was pulled to the side of the road, and presently the word was passed that a toggle joint in the shaft drive had given way. Later, repairs having been made, the car was restarted and completed a round 1:07:52 from the time of the official start. It passed the grandstand on the beginning of the second round going rather slowly, and quit the race at the White station at Bull's Head Corner.

**No. 5, 90-horsepower Locomobile**, driven by Joseph Tracy. The crowd had a good chance to size up Dr. Thomas' big



DINGLEY AND NICHOLS IN THE G. B. POPE-TOLEDO WHICH WON THE TRIALS.

**SUMMARY OF THE RACE, INCLUDING ANALYSIS OF THE PERFORMANCES OF DINGLEY AND TRACY,  
WINNERS OF FIRST AND SECOND PLACES.**

Date of race, Saturday, September 23, 1905.

Object of race, to select American team of five cars for the Vanderbilt Cup Race to be held Saturday, October 14.

Race commenced at 5:30 A.M., and was called off at 8:15 A.M.

Length of course, 28.3 miles; course covered four times. There were no controls.

Total distance covered from start to finish, 113.2 miles. Race won by Dingley in Pope-Toledo; [total elapsed time, 2 hours 50 seconds.

Dingley's average speed in total elapsed time, miles per hour, 56.54.

Dingley's average speed, miles per minute, .941.

Dingley's average speed, feet per second, 82.8.

Dingley's fastest round (28.3 miles), 27 minutes 58 seconds.

Dingley's average speed in fastest round, miles per hour, 60.71.

Second place won by Tracy in Locomobile; total elapsed time, 2 hours 1 minute 49 seconds.

Tracy's average speed in total elapsed time, miles per hour, 55.8.

Tracy's average speed, miles per minute, .930.

Tracy's average speed, feet per second, 81.8.

Tracy's fastest round (28.3 miles), 29 minutes 13 seconds. Tracy's average speed in fastest round, miles per hour, 58.12.

Fastest round in race made by Dingley in 27 minutes 58 seconds.

Most uniform performance in the race made by Tracy (Locomobile).

Tracy was four seconds in the lead of Dingley at the end of the third round.

Cars that finished the four rounds and qualified for positions on the American team: Pope-Toledo (Dingley); Locomobile (Tracy); Royal Tourist (Jardine); Haynes (Nutt); and Thomas (Roberts).

Tracy (Locomobile) ran throughout the race without stopping and was the only driver who did so.

The Christie car made two rounds and was the only car running when the race was called off.

The White steam car made one round and half of the second and dropped out at Bulls Head Corner.

The Franklin air-cooled car and the six-cylinder Pope-Toledo each made one round and dropped out before finishing the second.

Matheson No. 3 started, but did not complete one round. The Premier air-cooled car, No. 11, and the Matheson, No. 10, did not start.

Gordon-Bennett racer as it came to the line with No. 4. Tracy and his mechanician, Al Poole, wore French racing hoods of felt on the top of which handkerchiefs were pinned, so that they could readily clean their goggles during the race, the speed of racing blowing the handkerchief out of the way when released. Tracy chatted with A. L. Riker, designer of the car, while his mechanician gave a last look at the running gear. About a minute before the start the motor was cranked, and the contrast of artillery reports with the previously silent steamer was striking. At 5:38 the starter yelled "go," and Tracy in the monster car started forward almost imperceptibly, apparently on the high gear, and accelerated faster than any other entry, disappearing down the road in a fine burst of speed. Tracy made the only non-stop run of the day and finished second at 7:39:49 o'clock, just 59 seconds "elapsed time" slower than Dingley, the winner. He made his rounds with great regularity, and each round faster than the previous one, the last round being at the average rate of 58.12 miles an hour. This is slow for a car that has a road record of 85 miles an hour, but the driver was understood to be acting under orders and saving his car for the final race.

No. 6, 60-horsepower Christie, driven by Robertson. When the Christie car was rolled up to the line it was minus a bonnet. Between the transverse motor in front and the peculiar arched radiator, there was a vacant space above the frame into which the exhaust pipes pointed. Mr. Christie, the designer, stood beside the driver, giving him final instructions, which the latter apparently considered unnecessary, as he motioned Mr. Christie away so that he could hear the counting of the timer. Just before

the start, the car was rolled backwards and forwards to start the motor, which got into action with a noise that would have overwhelmed a battery of six-pounders, and while the motor ran idle the engine vibrated as though shaken by a monster hand. On its first round the car threw two tires at the Jericho turn and suffered a long delay undergoing repairs. It was finally got under way again, and finished the first round at 7:30:37 o'clock. The next round was made without mishap at the rate of 52.03 miles an hour, and the car was on the third round when the race was called off at 8:15 A.M.

No. 7, 40-horsepower Royal Tourist, driven by Robert Jardine. This entry was practically a duplicate of the 1906 touring car, and was driven by the designer, who had made some fast time in practice on the course. The car had been stripped of every superfluous ounce, including the floor boards, and the driver and his mechanician were perched over the machinery. They both made a good starting impression, which was increased later by their plucky conduct in a very tight place. Both took the race seriously, and did little or no talking with the officials or bystanders. When the word was given at 5:42 o'clock the car got away smartly with little noise and the cylinders firing beautifully. This car ran with remarkable regularity, the third and last rounds being run at a rate of speed differing only by 2-100 of a mile an hour. The second and fastest round was made at the rate of 50.92 miles an hour. On the third round No. 7 met with one of the most extraordinary mishaps on record, turning bottom side up in the Guinea Woods, and pitching both men out. A number of chauffeurs alongside the road righted the car,

the two men jumped in and were off again with a negligible delay.

No. 8, 60-horsepower Thomas, driven by Montagu Roberts. The long, lean six-cylinder racer produced an impression of speed as it moved up to the tape with the youthful driver at the wheel. The motor churned away noisily and started the bonnet in a series of vibrations that communicated to the horn, perched on the edge of the hollow dash like some gayly colored fly preparing to alight. Some of the cylinders spat out flames more viciously than others, but all quieted down to a steady roar when the car pulled out at 5:44 o'clock. Roberts, who had already been on the course several times, seemed quite cool, cleaned his goggles leisurely, and did not take hold of the wheel until almost the instant of starting. His first round was finished at the rate of almost 55 miles an hour, and as he passed the line several pieces of wood fell from the car. These were portions of his storage battery box, which broke, and the liquid spilled out during the second round. Fortunately, there was an old spare battery of three cells on the car. This was wired up, and the mechanician, Frederick Grant, held the battery between his feet on the floor of the car during the remainder of the race, and was so badly burned by the acid that splashed out that he was laid up after the race. After the loss of the new battery the car ran on practically three cylinders, and finished the race at a very low speed at 8:13:40 o'clock in fifth place.

No. 9, 60-horsepower Franklin, driven by W. F. Winchester. The interest of the experts was aroused when the big eight-cylinder, air-cooled car came to the line, as many then saw it for the first time. Its great row of cylinders was exposed to plain

view, the car being minus a bonnet, and, of course, there was no radiator in front or water connections to obstruct a hasty inspection. At the line the mechanician stood on the ground until about a minute before the start, when he cranked the motor, Winchester evidently taking no chances of overheating the motor while the car was standing still. The cylinders were fitted with auxiliary exhaust ports, and the rapidity and volume of the explosions kicked up a tremendous row. The seats appeared to be very high, and Winchester sat up behind the wheel and took notice of all that was going on. After the motor started he apparently could not hear the timer calling off the seconds, and Starter Wagner waved his hand when the last second had expired. The car got away comparatively slowly and with the peculiar automatic gun noise characteristic of the Franklin racers. Winchester completed his first round at the rate of 46 miles an hour, but was put out in the second lap by the propeller shaft pulling out of the back connection at the differential casing. In this car the driving effort was transmitted through the rear springs and the pulling apart of the driving connections may have been caused by the working of these springs. The result was a disappointment, as many were anxious to see how an air-cooled car would behave in the race, and the mishap had no connection whatever with the air-cooled features, but might have happened to a water-cooled car of the same structural build.

**No. 10, 40-horsepower Matheson**, driven by Tom Cooper. This car did not come to the line. It reached the course only the day before, and was out of tune, so that while it was weighed in, it was not taken out of the Matheson temporary garage at Mineola on the morning of the race.

**No. 11, 60-horsepower Premier**, driven by George Weidley. This car was withdrawn. It not only did not start, but never left the Premier factory in Indianapolis. The trouble is said to have been that it was over weight, though in trials it had made some fast miles.

**No. 12, 50-horsepower Pope-Toledo**, driven by H. H. Lytle. To the onlookers it seemed as though chance had reserved one of the most likely winners for the last car sent away. No. 12 came to the line under her own power, and there Lytle stopped the motor and the six big cylinders ceased firing very much like a battery of field guns. Lytle was evidently in a holiday mood, for he laughed and talked with the officials, and nodded back salutations to the press stand, with which he was manifestly on good terms. His fine showing in the 1904 Vanderbilt race and his splendid exhibition of pluck in the recent Gordon Bennett were both recalled, and the wish added that he would come well out of the trials. He asked Gillette for some chewing gum, and Announcer Prunty passed the word along to the grandstand, from which a precious package was handed down. The

motor started easily on cranking, and on Wagner's final "go" Lytle moved forward a few feet, then almost stopped, having apparently missed his gear, and finally went off with a rush. He only completed one

round, but it was a fast one, at an average speed of 59 miles an hour. On his second round he broke his subframe on the North Hempstead Turnpike and was out of the race.

## At the Start and Finish Line.

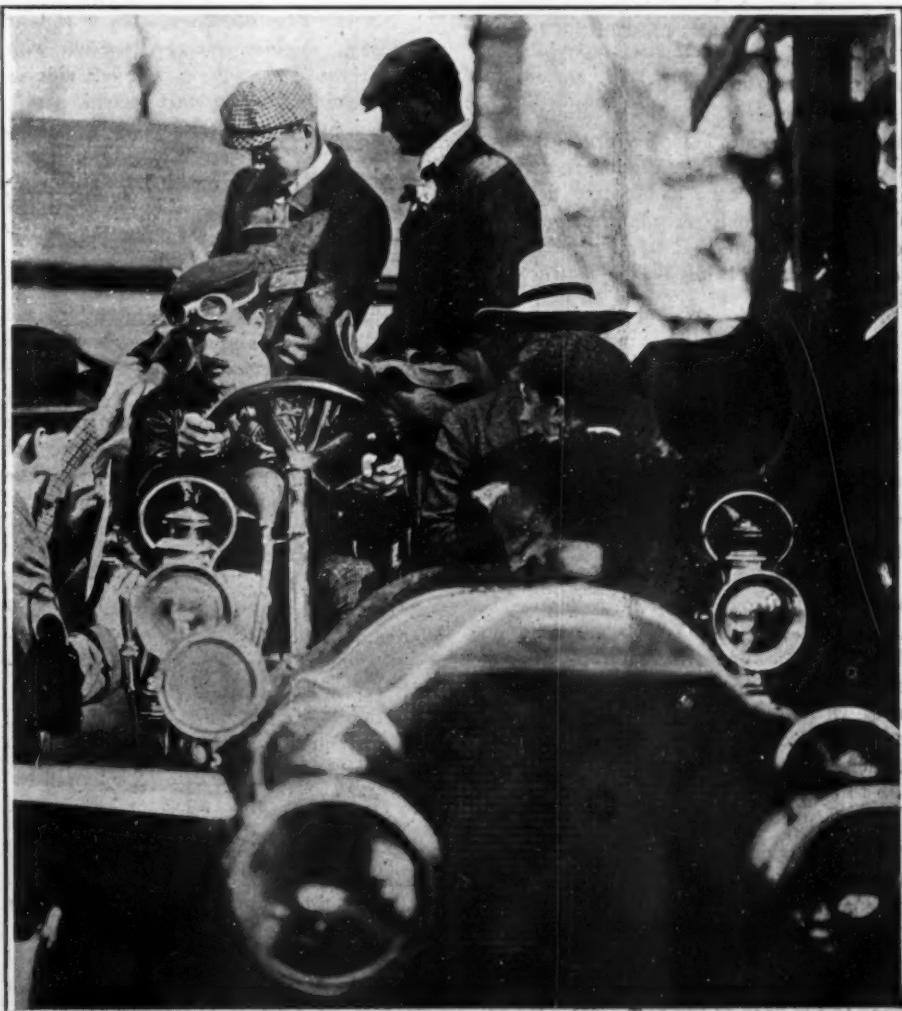
**A SMALL army of race officials, press representatives, photographers, program men, members of the trade and spectators moved upon the course Friday afternoon and night taking possession of every vacant room to be secured in Garden City, where the headquarters of the race commission was established in the Garden City Hotel, and in Mineola, New Hyde Park, Lakeville, and even the more remote villages located at the turns of the course. Almost all night long carpenters, telephone and telegraph workmen, and others labored energetically to put the finishing touches on the grandstand and official stand that confronted each other on the broad Jericho Turnpike just beyond the northwest corner of the village of Mineola.**

Few got more than three or four hours' sleep during the night; some none at all, for those who had no reason for staying up

after the usual bedtime were disturbed by the constant rushing about of automobiles; there seemed to be a constant procession of them between the grandstand and Garden City, two miles to the south.

The Matheson party stayed up all night at Mineola working on entry No. 10, Tom Cooper's car, which had been driven down from the factory in Holyoke, Mass., on Friday and developed a hot bearing through poor lubrication, so that a new oiler had to be put on. Despite the hours of labor expended on the car, it could not be got in shape for the start Saturday morning.

Long before the first faint suggestion of dawn of the day of the race all who had gone to bed turned out, and, after a hurried breakfast, began gathering at the starting point in cars and on foot. The moon, in its last quarter, shone brightly almost overhead, where the stars gleamed steadily un-



WILLIAM K. VANDERBILT, JR., DONOR OF THE CUP, AT THE WHEEL OF TOURING CAR ABOUT TO LEAVE THE COURSE WITH PARTY OF FRIENDS.

## THE AUTOMOBILE.

September 28, 1905

obscured by a single cloud. The air was fresh but not at all cold, and there was only a gentle breeze blowing lazily from the southwest.

From northeast and southwest spectators' cars began arriving in the partial darkness by 4 o'clock, their headlights blazing and horns honking as they were hurried along by the guardians of the course to keep the road clear between the stands. Parking spaces were found at the sides of the road beyond the stands, and streaks of white light from gas lamps alternated with bands of intense darkness across the road.

The grandstand this year is a substantial affair, larger than last year and having a fence three feet high in front, built of 2 by 8 planking. It extends for 200 feet westwards from the end of the stand, with parking spaces back of it, where spectators are not allowed to stand. On the opposite side of the course is the smaller official stand, a two-story affair, with a section for the half dozen timers, another for the judges, a third for the twelve telephones in direct connection with field instruments located along the course at Jericho, East Norwich, Bulls Head corner, "Guinea Woods," on the Back road, Willis avenue, Lakeville and New Hyde Park; and larger sections for newspaper men and a corps of telephone and telegraph operators to send the reports of the race as it progressed, to New York and throughout the country.

At either end of the official stand were improvised counters loaded with sandwiches and coffee. Surrounding the location on all sides were open corn and potato fields, a solitary little old farmhouse and its weather-worn barn, that stood just back of the official stand, being the only structures within 1,000 feet.

Nothing obstructed the view of the course in either direction from either of the stands for half a mile, when the range of vision toward the west was cut off by close growing small trees bordering the road.

Among the earliest arrivals on the spot were the officials—A. L. Riker, Rollin H. White, Chairman of the Racing Board Robert L. Morrell, Secretary A. G. Batchelder, S. M. Butler, Starter Fred Wagner, Announcer Peter Prunty, A. R. Pardington, F. G. Webb, C. H. Gillette, J. C. Kerrison and other members of the Chronograph Club of Boston, the local guardians of the course, and R. G. Betts, of the Federation of American Motorcyclists, with his corps of mounted men from the Brooklyn Motorcycle Club to patrol the course.

William K. Vanderbilt, Jr., donor of the great trophy cup, for which the big race of October 14 is to be run, drove over from his estate at Lakeville in a big slate-covered foreign touring car, his physician, Dr. L. N. Lanehart, of Nassau hospital, by his side and a big red cross painted on muslin attached to the back of the rear seats. He arrived at 4:50 o'clock and stationed his car directly at the end of the official stand,

ready to start in an instant in case of reported accident on the course. He was followed five minutes later by H. L. Bowden, of Boston, in his Mercedes Flying Dutchman II, which created some excitement, as it was parked next to Vanderbilt's car, from the fact that the shutter in the huge muffler was open and the interior glowed and roared like a blast furnace. James L. Breese was on hand with his big Mercedes, and S. B. Stevens, T. H. Hilliard, E. T. Birdsall, W. Gould Brokaw, Col. A. A. Pope, E. R. Thomas and L. R. Spear were among the earliest arrivals.

First of the racing cars to arrive was the six-cylinder Thomas, with Montagu Roberts at the wheel. It reached the stand at 4:55, vicious little puffs of blue flame darting out of the left side of the long red bonnet, where the ends of the exhaust pipes protruded. The car had a slender and not ungraceful appearance. It was the center of interest for the 200 people on the scene for a minute or two and was then run up the road above the starting line on the left side of the course, to be in the order of start.

Two minutes after it came the 60-horse-power Pope-Toledo, driven by B. F. Dingley, with heads and figures of the two men in the car so wrapped in garments, caps and goggles as to be unrecognizable a rod or two away. Dingley took up position with his car right at the tape on the left side of the road, as he was to start second.

It was just one minute later when W. F. Winchester came up in the Franklin—a dark horse in the race, with its eight-cylinder air-cooled engine setting high on the wood frame, and the seat for the driver and mechanism perched high over the rear axle.

By this time the touring cars had ceased to pass the stands, and as the engines of the racing machines were stopped and the reverberating thunder of their heavy exhausts died away a remarkable quiet pervaded the scene that but a few seconds before had been so noisy and confused. Even the voices of the officials as they conferred together and of the few spectators in the grandstand seemed to be subdued.

It was 5 o'clock. The gray light of dawn was stealing over the unusual scene and all persons present seemed to feel unconsciously the influence of the momentous occasion in American automobile history.

Although originally set for 5 o'clock, the start was postponed for half an hour to await the nearer approach of sunrise in order to give the drivers the benefit of the increased light, especially in the dark stretches of the Guinea Woods. Most of the drivers knew of this intention and did not make their appearance until after 5 o'clock.

Robert Jardine drove up in the Royal Tourist from Krug's Hotel, quarter of a mile east, at 5:07 A. M., Mongine, in the Matheson No. 3, at 5:17, from Johrens' Hotel, and three minutes afterward the

noisy Christie front drive racer, Walter White, in the quiet White steamer, with its gray metal body and pointed front, in notable contrast with the blunt-ended, wide tread, blue-bodied Christie.

Frank Nutt, in the Haynes converted touring car, and Tracy in the business-like Locomobile Gordon Bennett racer, came up in quick succession to the starting line and were quickly lined up on opposite sides of the road in their order of start.

The last car to arrive was the last numerically—No. 12, the six-cylinder Pope-Toledo, driven by Herbert Lytle, who had been picked as a popular favorite, together with Tracy and White. The long, high-peaked bonnet, with the flashing exhausts from its left side, gave the car an appearance of great power, and Lytle's chances of making a favorable showing grew in the onlookers' mind. A notable feature of the car was the fact that the front sprocket was larger than the rear sprocket.

Tom Cooper, in Matheson No. 10, and the Premier air-cooled racer that was to have been driven by its designer, G. A. Weidley, failed to come to the start, and it was announced later that they had been scratched. The Premier was reported to be eighty pounds over weight and had never been shipped from the Indianapolis factory.

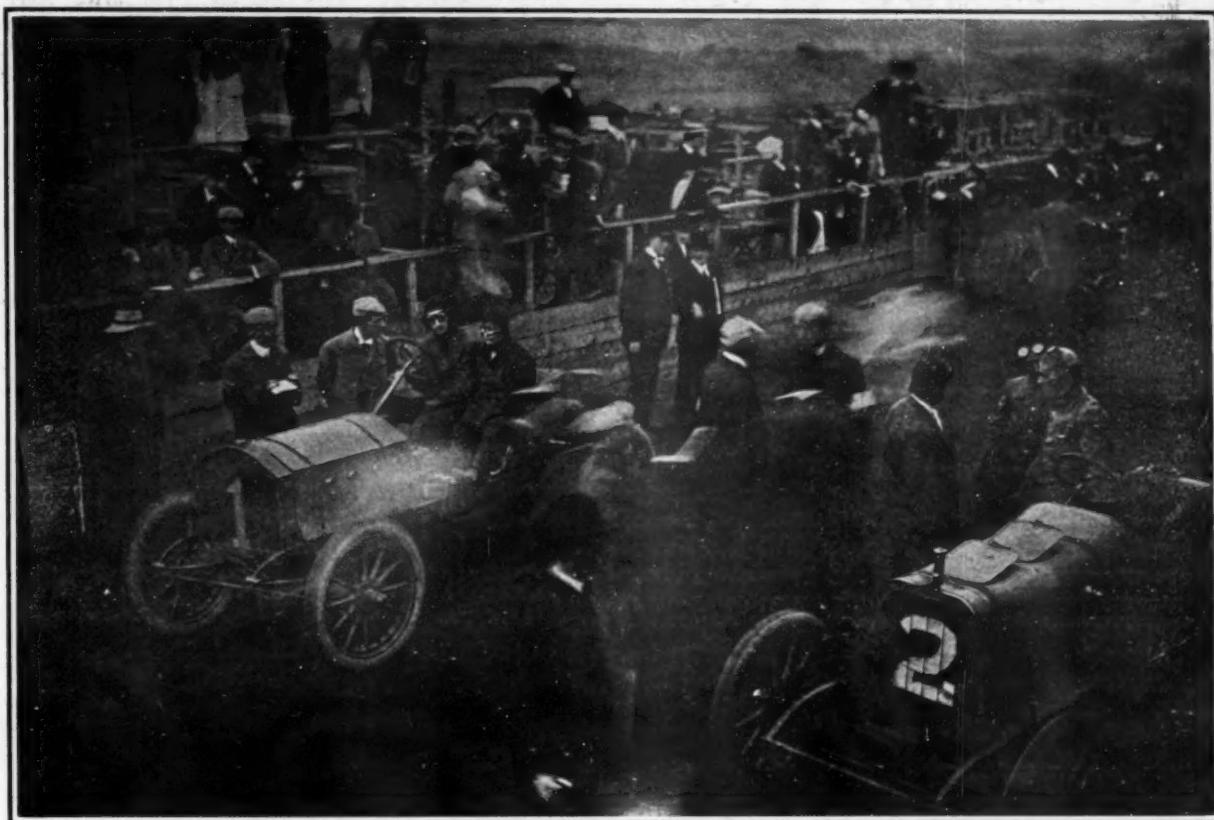
When all the cars were in readiness there was a few minutes' quiet while the minutes were counted off; the starter, clerk of the course, Chairman Morrell, William K. Vanderbilt, and a number of other officials, stood in a little group around the Haynes car, while the nerve-tingling words: "Get ready," "one minute," "thirty seconds," "fifteen seconds," "ten seconds," "five seconds," "Go!" were called.

Nutt's mechanician had cranked the engine, jumped into his seat, and the car moved from the line quickly but smoothly, and sped down the slight decline beyond the stands.

The first car was off on its uncertain journey to try for a place in the American team for the second annual race for the Vanderbilt cup. But it did not hold attention long; it was forgotten almost at once, as preparations were begun to get Dingley started in the Gordon Bennett Pope-Toledo only two minutes later.

In quick succession all of the ten cars were sent away in their proper order, most of them getting off well, with the exception of the White, which started slowly, and before it had gathered headway emitted an ominous pounding and slowed down, evidently owing to a mishap, which later was learned to have been the breaking of a toggle joint in the propeller shaft.

Following the disappearance of Lytle in Pope-Toledo No. 12, Col. Albert A. Pope's entry, at 5:48 A. M., there was a wait of nearly ten minutes, during which the spectators, photographers and others were cleared from the course and sought points



NUTT IN HAYNES No. 1 AND DINGLEY IN POPE-TOLEDO No. 2 AT THE STARTING LINE.

of vantage to catch the first glimpse of the first arrival from the opposite direction.

Telephone bells had already begun to ring and reports came in from the remote points along the course. The Christie to have lost both front tires at Jericho.

Passage of Nos. 1, 2 and 5 were reported from Bulls Head, Guinea Woods, Willis avenue and Lakeville.

No. 2 had passed No. 1 somewhere on the

north side of the course and was reported first at Lakeville and then New Hyde Park.

The last-named station was less than two miles away. Everybody began straining his eyes to catch the first sight of the car coming through the gray, half light down the oiled streak of roadway extending westward into the impenetrable distance.

A red flag fluttered at the top of the first rise half a mile away, and the megaphone

announced "Car coming." A few seconds ticked off. Then the faint rattling roar of the machine was heard, and in another instant a gray speck could be seen creeping along the center of the road. It slid over the crest of the rise, dropped down a slight dip at great speed with a white "2" growing visible on the front, flashed up the incline and past the stands at fully seventy miles an hour, going well.

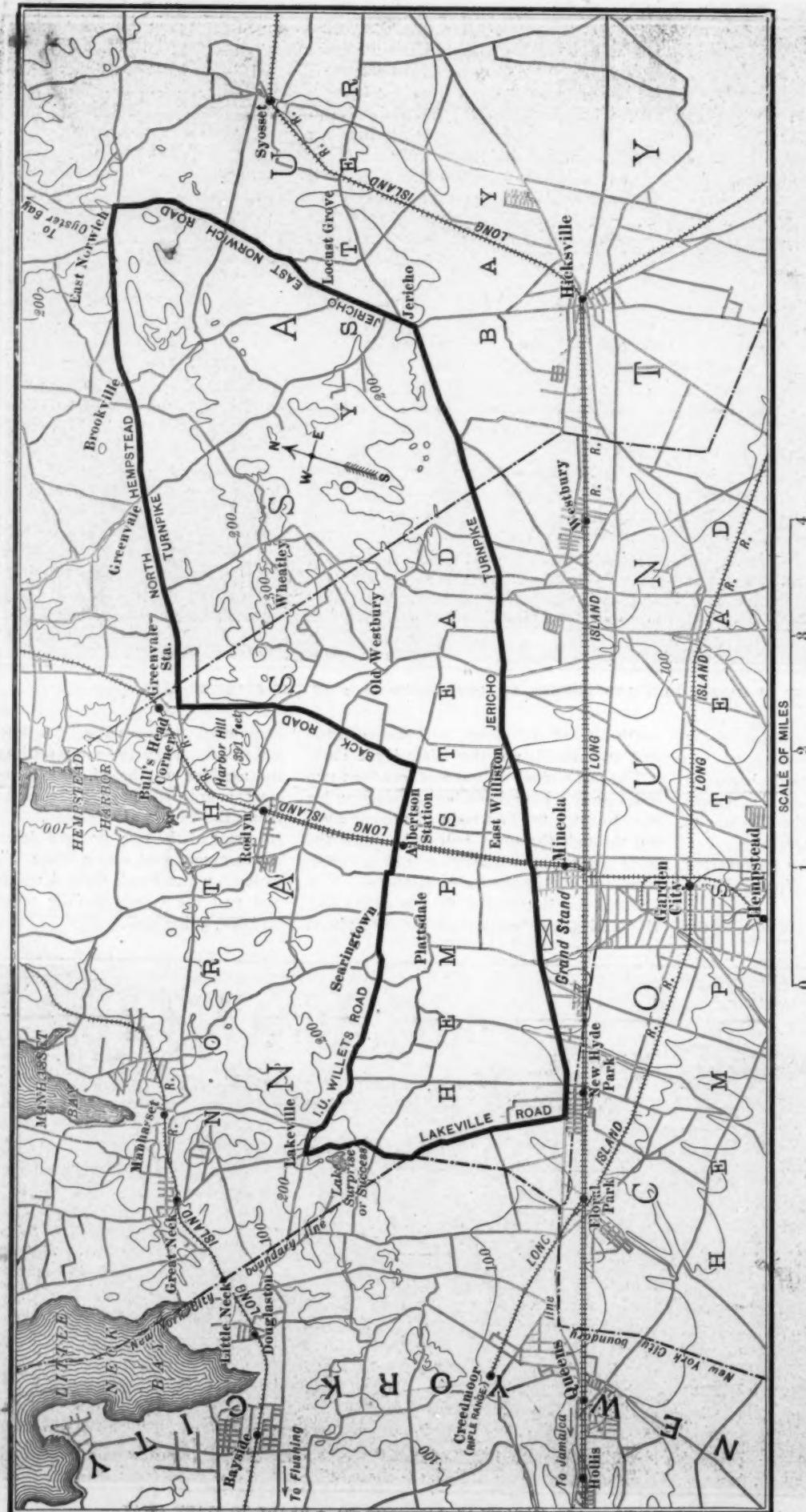


DINGLEY IN POPE-TOLEDO NO. 2 AND MONGINI IN MATHESON NO. 3 READY TO START AWAY.

September 28, 1905.

**SCALE MAP OF THE LONG ISLAND COURSE FOR THE ELIMINATION TRIALS AND VANDERBILT CUP RACE.**

Drawn by our own Cartographer from U. S. Maps and other accurate data.



There was a cheer from the crowd, and elapsed time. Attention of the official timer was called to the error, but it was not publicly corrected at the time.

There was a long wait of nearly eight minutes before the call of "Car coming" was repeated, and soon after, the Haynes passed, going steadily and very fast for a 50-horse-power touring model. It's elapsed time was announced as 35:38.

During the succeeding interval the White was reported to have started again, and the times of passage of No. 5 at Willis Avenue, Lakeville and Hyde Park were given.

At 6:00:27 Tracy roared past, going like a whirlwind, having made up four minutes on No. 1.

More than five minutes elapsed before the fourth car passed, and it turned out to

be Roberts, in the six-cylinder Thomas, who started eighth. His elapsed time was 30:53 for the 28.3 miles, 24 seconds less than Tracy's.

Soon there was a call from Announcer Prunty of "Two cars coming," and there was a hum of excited expectancy while the people waited for what proved to be the feature of the race at the grandstand. No.



WHITE IN STEAMER No. 4 AND TRACY IN LOCOMOBILE No. 5 AT THE STARTING LINE.

7, the Royal, hove into sight first and dropped into the dip just as No. 12—Lytle, in the big Pope-Toledo—topped the crest behind him.

For a time the difference in speed seemed imperceptible, but as the two cars flew up the short rise to the grandstand Lytle quickly closed the gap between them. Less than 100 yards from the starting line he suddenly pulled out to the left and, touching

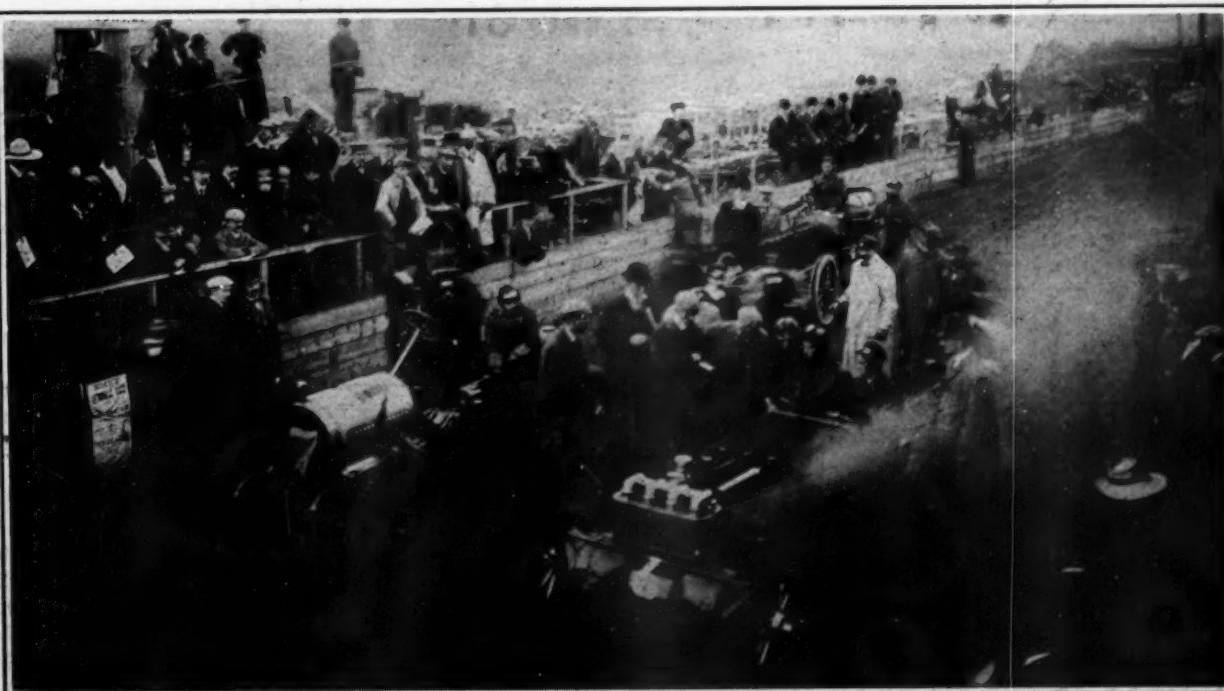
the accelerator, flashed past his opponent at seemingly double his speed.

Lytle passed the judges' stand a good twenty yards in the lead, grazing the spectators lined up behind the rope so closely as to cause them to fall back hurriedly. The timers credited an advantage of two-fifths of a second to Lytle.

Whether this neat bit of clever driving and grandstand play was fatal to his

chances or not, is uncertain, but on the North Hempstead Turnpike, only a few miles further on, in the second round, he had to abandon the race, and telephoned the heart-breaking news that the sub-frame of the car had broken. The first round had been made in 28:44, the second fastest of the race.

Six minutes passed, and then the Franklin went by, going slowest of all, and Win-



ROBERTSON IN CHRISTIE No. 6 AND JARDINE IN ROYAL No. 7 AT THE STARTING LINE.

chester's elapsed time was given as 36:46. Some of the eight air-cooled cylinders seemed to be missing fire.

When Dingley finished his second round, at 6:31:05, still leading, the Matheson, White and Christie had not yet completed the first circuit, notwithstanding there was nearly a ten-minute interval following the passage of the Franklin.

Tracy finished his second round about ten minutes after Dingley, having passed Frank Nutt and gained second position. He passed the stand somewhat slower than on the first round and the car was "weaving" perceptibly.

Encouraging applause greeted Walter White as he crossed the starting line three minutes later, his car having been repaired. But he was going slowly, and it was clear that the machine was not fit.

Less than half a minute later the Haynes finished its second circuit third in order and running evenly and as fast as before.

Again the cry of "Two cars coming" aroused excitement a few minutes later, and soon the Royal and Thomas passed, hardly a minute apart, and with the six-cylinder car missing explosions.

Telephone messages from Bull's Head showed that Tracy was beginning to close up on Dingley, and the arrival of the two at the end of their third round was awaited with interest. Meantime it was announced that the Matheson had passed Jericho.

At 7:04:40 o'clock Dingley, in the four-cylinder, finished his third round, still first in order and going as well as ever, but when Tracy passed second in order at 7:10:36 A. M., going well and with reserve speed "up his sleeve," it began to look as if the race would go to the Locomobile, as many had expected. This belief was strengthened when it was announced that he was four seconds ahead of Dingley and it was seen that he was actually leading in the race.

Now Robertson, in the Christie, was heard from again, reports telling of his starting from Jericho, where new tires had been fitted, and passing Bull's Neck at 7:46:30 o'clock, going very fast. White was reported out at Bull's Head, where the White headquarters were located, and Mongini, in the Matheson, was reported passing the Guinea road. The Matheson, however, never passed the grandstand finishing its first round.

Close observers noticed that the left front wheel of the Royal Tourist was bent inward at the bottom when Jardine finished his third round in third place, as if the steering knuckle had been bent, but no word of any accident to the car had been received. It was not until after the race was finished that the story of the most unusual incident that had ever happened in a race was learned—the overturning of the car and its resumption of the race in the hands of the same men within a couple of minutes.

The very "squat" Christie was a memorable sight as it passed, finishing its first

round in ninth place, at 7:31 A. M. It was skimming the oiled road at tremendous speed, the rear end jumping about and throwing the two men off their seats and from side to side in a most dangerous way, especially when it was remembered that the driver was almost wholly unfamiliar with the machine.

Walter Christie, who had always driven the car himself before, had abstained from entering this race out of deference to the wishes of his family, and he said after the race that Robertson had not driven the machine before, except to make one circuit of the course with it. Christie was even giving him instructions while he waited at the tape for the word to go.

It was not until Robertson finished his second round, however, that his speed could be determined. Then a little calculation showed that he covered the 28.3 miles in 32:38. He was still going as fast when the race was called off.

The first man to finish was, of course, Dingley, who had never been passed during the race, and made a most consistent and excellent run, making the fastest circuit of all, in which he averaged more than sixty miles an hour, and completing the full 113.4 miles in just 50 seconds more than two hours. He was given a rousing cheer as he finished.

Then everybody waited eagerly for reports from Lakeville and Hyde Park, telling the time of Tracy's passage, as it was known that he was close behind; if he passed the judges' stand within eight minutes after Dingley he would win.

But the seconds sped away; the inevitable clock was against him, and when the message came from Hyde Park seven of the precious minutes were gone, and none had made the distance from Hyde Park to the stand at Mineola in less than two minutes.

When the Locomobile did finally loom into view with the red rays of the sun gleaming on its huge No. 5, it was plain from the way it dropped into the dip in the road that it was making wonderful time.

Down it sank into the hollow, hesi-

tated a moment, then shot up the grade like a fast boat mounting the crest of a giant swell at sea. As the car moved down the lane of people it was over farther than usual on the right side of the road, and just as it approached the beginning of the plank fence that railed off the parking spaces the rear wheels skidded. The great road locomotive made a momentary dash toward the knot of spectators who had crowded out onto the course there.

Many who saw the incident feared a frightful accident, but the imperturbable driver straightened the machine up instantly and after a swerve toward the other side of the road it found the center and sped on between the stands with no slackening of pace.

When Tracy's time was announced and it had been compared with Dingley's, it was found that Dingley had won by just 50 seconds, having regained the four seconds' lead that Tracy had in the previous lap and covered the last circuit in one minute three seconds less time than his opponent.

Frank Nutt finished third, nearly fourteen minutes after Tracy, and in eight minutes more Jardine crossed the line fourth. But the Haynes car had twelve minutes start over the Royal Tourist, so Jardine took third place, his elapsed time being four minutes fourteen seconds less than Nutt's.

Robertson, in the Christie, finished his second round two minutes after Jardine finished the race. He was going as fast and as seemingly reckless as before.

Last to cross the finish line was Roberts, in the Thomas, which just limped past the stand, three of the cylinders doing no work. But by finishing the four laps, he gained fifth position and a place on the American team. As soon as the Thomas finished, the race was called off, and the Christie car stopped on the course.

Half an hour later—8:30 A. M.—the scene was almost deserted, the race commission having adjourned to Garden City, and the spectators driving away in their cars or going afoot to the station at Mineola.

## At the Corner in Sleepy East Norwich.

THE little village of East Norwich, Long Island, which marks the extreme northeasterly point of the Vanderbilt cup course, is a picturesque village which gives the impression of being composed of neat white houses and shady, well-kept grass-plots. At the turn in the course is located a hotel or road-house, snug and comfortable looking under its shade trees; and past the hotel stretches the road that leads to Oyster Bay, the summer home of the President, two miles to the north.

The course outside the village afforded good opportunities for seeing the cars at speed, both before and after making the turn; and the distance of the village from

the official center, Garden City, made it comparatively easy to obtain accommodation for the night.

All through Friday night the quiet of the little place was rudely broken by the exhaust from passing cars, as the men in charge of tire stations or repair depots went to their posts, carrying supplies; or belated automobilists searched for accommodation or vantage points on the road. Glaring headlights flashed their rays into the rooms where people were trying to sleep, and sped on down the road, their piercing rays visible for a long distance through the intense darkness of the moonless night.



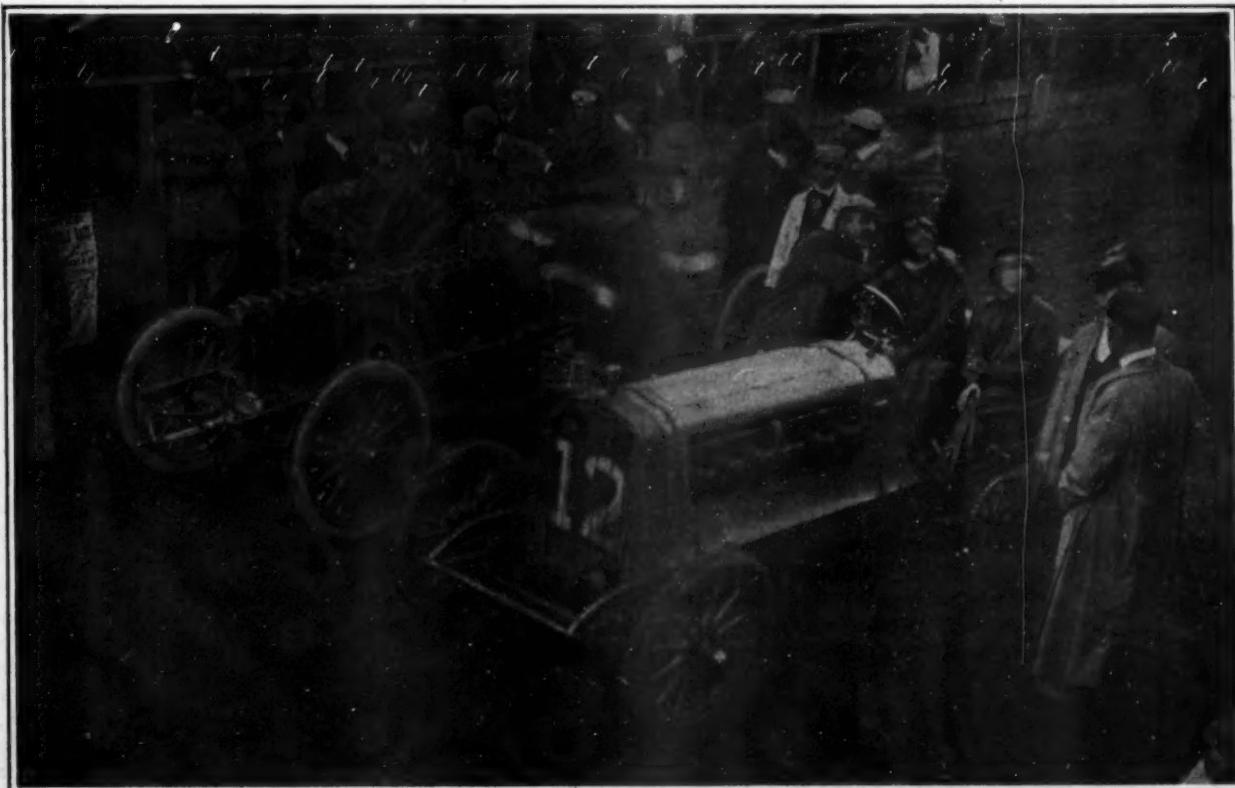
JARDINE IN ROYAL No. 7 AND ROBERTS IN THOMAS No. 8 AT THE STARTING LINE.

As morning approached the passing cars increased in numbers, and an occasional open exhaust announced the passing of a big, powerful machine going somewhere in a hurry. Long before daylight, however, noises became less frequent, and when the sun began to rise the quiet of expectancy was almost unbroken. In the houses people were eating breakfast by lamplight—a strange and uncomfortable meal for most

of them. Then doors were opened and closed softly, and the dark streets became thinly sprinkled with people making for the places where they thought they could see the most.

The general outline of the northeastern section of the course is an acute angle; but the actual turn is a right angle at the intersection of two village streets forming parts of the East Norwich road and the

North Hempstead turnpike. As the cars approached by the East Norwich road they rounded a slight curve which brought them in sight of the corner when about quarter of a mile away, on a down grade, which merged into a level near the corner. A quarter of a mile beyond the corner the grade again dropped after a slight turn in the road, giving the cars an excellent opportunity for accelerating. Just at the top



WINCHESTER IN FRANKLIN No. 9 AND LYITTLE IN POPE-TOLEDO No. 12 READY FOR STARTING.

## COMPLETE TABLE OF PERFORMANCES, GIVING POSITIONS AND OFFICIAL TIMES OF ALL CARS BY

START- ING No.	CAR.	ENTRANT.	DRIVER.	MECHANICIAN.	H. P.	TYPE.	No. OF CYL'D'S.	TIRES.	DRIVE.
1	Haynes.....	Elwood Haynes....	Frank Nutt.....	J. Clark.....	50	Touring car.....	Four....	Diamond....	Shaft.....
2	Pope-Toledo.....	Albert L. Pope....	B. F. Dingley....	Tony Nichols.....	60	Gordon Bennett racer.	Four....	Diamond....	Side chains.....
3	Matheson.....	L. M. Palmer, Jr....	Ralph Mongini....	John Green.....	40	Touring car.....	Four....	Diamond....	Side chains.....
4	White.....	Rollin H. White...	Walter C. White...	John Hantack.....	40	Steam racer.....	Two....	Diamond....	Shaft.....
5	Locomobile.....	Dr. H. E. Thomas	Joseph Tracy....	Al Poole.....	90	Gordon Bennett racer.	Four....	Diamond....	Side chains.....
6	Christie.....	James L. Breese...	George Robertson	N. Leichtener.....	60	Front drive racer....	Four....	Goodrich....	Spur gear to hubs....
7	Royal Tourist....	E. D. Shurmer....	Robert Jardine....	R. H. Tucker.....	40	Touring car.....	Four....	Diamond....	Shaft.....
8	Thomas.....	Harry S. Houpt...	Montagu Roberts..	Frederick Grant....	60	Vanderbilt Cup racer.	Six....	Goodrich....	Side chains.....
9	Franklin.....	E. H. R. Greene...	W. F. Winchester...	W. E. Raux.....	60	Air-cooled racer.....	Eight....	Diamond....	Shaft.....
12	Pope-Toledo.....	Col. A. A. Pope....	H. H. Lyttle.....	Jack Tattersall.....	90	Vanderbilt Cup racer.	Six....	Diamond....	Side chains.....

of this grade, on the north side of the road, was located a Diamond tire control with a platform built out on the slope.

The road at the corner is fairly wide and slightly banked. The inside of the turn is bordered by a concrete curb about eighteen inches high. On the outside of the turn is a wide open space; but on entering the North Hempstead Turnpike there is a bank of grass, and three or four feet back on the grass is a telegraph pole. Thus, it was necessary to take the corner close to the inside, the telegraph pole and grass bank preventing the drivers from taking advantage of the wide sweep afforded by the open space.

Practically the whole population of East Norwich turned out to see the cars pass, and there were many visitors from neighboring places. Oyster Bay was largely represented, the people coming in automobiles, carriages, on bicycles and on foot; and while it was still dusky, someone, peering up the road that led to Oyster Bay, exclaimed: "Here come the Roosevelt children!" They came armed with a basket that looked very much as if it might have contained something in lieu of breakfast.

There were about two hundred persons assembled on the corner, and many more took up points of vantage at various points along the road nearby. Those on the corner had little fear of the cars, and pressed close to the edge of the road all the time. There were no exhibitions of recklessness, however, and no difficulty was experienced in getting the crowd to retreat after having advanced too far. So eager were the people to see the cars that they began to gather

long before the stars had disappeared; and, as the village wit remarked: "The first man that got there found a crowd waiting."

At 5:30 o'clock, the hour of starting, the flagmen at the curves abandoned their lounging postures and became alert; conjectures as to who would arrive first were made freely, and everyone was on tiptoe to catch a glimpse of the first car. Suddenly a red flag waved in the distance, and a faint, hollow megaphone voice gave the familiar warning cry "Car coming," which was taken up and passed along the road and around the corner, the signals keeping half a minute ahead of the car.

Ten seconds after the first signal, or at 5:37 o'clock, a car shot into view around the curve, dropped down the grade and, swerving to the outside of the road, braked hard and turned the corner with a deliberation that was a surprise. It was No. 2, the four-cylinder Pope-Toledo driven by Dingley, and he had overtaken and passed the Haynes, driven by Frank Nutt, which was slated as the first starter. There was little time for conjecture, however, for, as the Pope-Toledo picked up the high speed after turning, there was another fluttering of flags and another succession of cries of "Car coming!" and thirty seconds after the first car, the Haynes turned the corner, evidently running slower than the first, and making the turn with equal caution.

It was confidently expected by the crowd that the White steam car, No. 4, would overhaul Matheson, No. 3, and turn the corner next; but as minute after minute passed and neither White or Matheson appeared, attention began to center on No.

5, the powerful Locomobile, which was expected to make fast time.

And presently it came at 5:44 o'clock, with a tremendous roar and flames shooting out of the exhaust pipes, going faster than either of the preceding cars; and, though Tracy, like the others, took the corner carefully, he got around and away more quickly than the first two.

The Christie front-drive car, No. 6, did not appear in its turn; and there was an interval of about five minutes between the passing of the Locomobile and the arrival of the next car, which proved to be the Royal Tourist, No. 7. Jardine was apparently crowding the car to its limit, for he came down the grade at a tremendous speed—seemingly faster than any of the others—and made a fast turn, skidding considerably, and just grazing the grass bank on the outside of the turn.

Only a few hundred yards behind came the six-cylinder Thomas, evidently bent on overtaking the Royal; the long red car swerved somewhat in taking the outside of the road approaching the turn, but swung around, like the Royal, very fast and skidded to the grass—almost exactly in the tracks of the Royal.

No. 12, the six-cylinder Pope-Toledo driven by Lyttle, was the next machine to pass, at 5:53 o'clock, the Matheson No. 10 and the air-cooled Franklin, No. 9, not appearing. The Franklin was close behind the Pope-Toledo, however, having apparently just been passed; these two machines were only ten seconds apart. Both took the turn carefully, but the Franklin swerved somewhat violently as it approached, caus-

## ROUNDS, AVERAGE TIMES AND SPEEDS PER ROUND, CAUSES OF WITHDRAWALS AND DETAILS OF CARS.

START. A. M.	POSITION.	1ST ROUND.		POSITION.	2D ROUND.	POSITION.	3D ROUND	POSITION.	4TH ROUND	AVERAGES.	POSITION AT FINISH.	START- ING NO.
5:30	6	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	6:05:38 35:38 35:38 47.66	5	6:44:23 1:14:23 38:45 43:82	5	7:19:58: 1:49:58 35:35: 47:70	4	7:53:32 2:23:32 33:34 50:58	Time per round, Miles per hour,	35:53 47.44	Fourth....
5:32	1	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	5:59:58 27:58 27:58 60.71	1	6:31:05 50:05 31:07 54:57	2	7:04:40 1:32:40 33:35 50:56	1	7:13:25 2:00:50 28:10 60:32	Time per round, Miles per hour,	30:27 56.54	First.....
5:34		Piston seized; car withdrawn at Jericho.										3
5:36	8	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	6:43:52 1:07:52 1:07:52 35:02		Broke toggle in second round.	start	ing: repaire d and	made one r	cund, but withdrew at Bull's	Head on		4
5:38	4	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	6:00:27 31:27 31:27 53.99		6:40:40 1:09:40 31:13	1	7:10:36 1:32:36 29:56 56:73		7:30:40 2:01:40 29:13 58:19	Time per round, Miles per hour,	30:27 55.80	Second....
5:40	9	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	7:30:37 1:50:37 1:50:37 75.35		8:03:15 8:03:15 32:38	Tires	came off ne ar Jer icho in first round; car race was ca lled off.	unin g when	8:01:18 2:19:18 35:37 47:67	Time per round, Miles per hour,	1:11:38 33.69	6
5:42	5	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	6:16:44:2-5 34:44:2-5 34:44:2-5 48.89		6:50:05 1:08:05 33:20:3-5	3	7:25:43 1:43:43 35:36 47.69		8:01:18 2:19:18 35:37 47:67	Time per round, Miles per hour,	34:49 48.79	Third....
5:44	3	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	6:14:53 30:53 30:53 54.98		6:51:15 1:07:15		7:28:05 1:44:05		8:13:40 2:29:40	Time per round,	37:25	
5:46	7	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	6:22:46 36:46 36:46 46.18		Dri ving shaft p ulled	out of sock	et at rear end.			Miles per hour,	46.26	Fifth....
5:48	2	Clock time, Elapsed time in progression, Elapsed time by rounds, Miles per hour,	6:16:44 28:44 28:44 50.09		Sub frame broke	at E ast Norwich	in se cond round.					12

ing a sudden and rapid scattering of the spectators. After the Franklin passed there was a long wait, during the course of which a motorcyclist from Jericho brought word that the Christie had lost two tires, which explained the non-appearance of the machine. Then the smaller Pope-Toledo again passed on its second round, making a faster turn than before. A few minutes later, at 6:11 o'clock, the White steamcar came through for the first time, its quiet running contrasting strangely with the roars of the other cars and with the megaphone cries announcing its approach. It was going very fast, but made a slow turn; speed was picked up quickly, but not as rapidly as some of the gasoline cars.

The Locomobile, No. 5, the Haynes, No. 1, and the Pope-Toledo, No. 12, passed on their second round, all running well; but ten minutes after the Pope-Toledo had passed, the driver, Lytle, came walking back with a forced smile; went straight to the telephone and, calling up the official stand, said simply, "My sub-frame's broken," and went back the way he came without speaking to anyone. He was out of the race and apparently felt it keenly.

The remainder of the race was uneventful, so far as East Norwich was concerned. The cars came around and took the corner carefully, all except Jardine in the Royal, who drove in startling fashion.

All the cars that passed on the first round—that is, all that started except Matheson, No. 3—passed on their second round, while in the third round the only cars that passed were the five that finished the fourth round also, and finally qualified for positions on the American Vanderbilt cup team—Pope-

Toledo No. 2, Locomobile No. 5, Haynes No. 1, Royal Tourist No. 7 and Thomas No. 8. Christie passed on his first and second rounds while the leaders were making their third and fourth; the front drive machine was going very fast, but seemed in distress, a great squeaking being heard as the engine was accelerated. This was the last car to pass, going through the second time at about 7:36 o'clock. The crowd thinned somewhat, as many of the people had wearied of the monotony of the regular and uneventful passage of machines; but those who remained hung around until long after the race had been called off at 8

o'clock in the hope of seeing some belated machine, or hearing further news of the race. Opinion was divided as to whether the winner would prove to be the Locomobile or the Pope-Toledo.

Though there was a field telephone at the East Norwich turn, but little information came over the wires, as far as the spectators at that point could learn. The time of starting was telephoned to East Norwich; the calling off of the race was announced by wire; and Lytle telephoned the news of his trouble to the grand stand. Apart from this, however, the instrument was little used.

## On the Lookout at Bull's Head.

**F**RIDAY night was a busy one at Bull's Head Corner on the North Hempstead Turnpike, and the White steamer contingent, who were quartered at this important point, were kept on the jump far into the night. The accident to the machine early Friday morning, when Walter White skidded with it into a telegraph pole near Sayville, had for a time apparently jeopardized the car's chances, but the force of factory experts began the work of repairs in the temporary garage behind closed and locked doors.

A curious crowd of villagers hung around the garage during the early hours of the evening and gazed at the racing car. All were carefully kept outside of the place, however, and were not allowed near the car.

Shortly after 7 o'clock the Matheson car, No. 3, driven by Ralph Mongini, came rush-

ing over the course at a high rate of speed. Robert L. Morrell, chairman of the cup commission, happened to be at the Bull's Head Corner, and flagged the car as it slowed down for the turn. Mr. Morrell took the driver to task for being on the course at that hour, and Mongini replied that his violation of the rules was the result of a misunderstanding at his headquarters in Mineola. He reported the other Matheson car as in trouble further down the road. Chairman Morrell requested Mongini to follow after him, and drove off toward Lakeville with the racing car tagging on behind. The Matheson engine was skipping spark and was twice stalled as a result of engaging the clutch too quickly, before it finally got away.

Just across the road from the White headquarters two large tents were pitched and fitted with cots for the accommodation of a

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number of the White men who had arrived Friday evening and could not be provided for in the poorly equipped hotels along the course.

An eighth of a mile down the road, the Goodrich and Diamond tire people had located tents on either side of the road, and had forces of shop experts on hand with spare tires.

Down at Bull's Head Tavern, at the junction of the Back road and the North Hempstead Turnpike, the crowd began to gather at an early hour on Saturday morning. The White steamer people had spent a good part of the night tuning up their car, and shortly after 4 o'clock it was steamed up ready for its run to the starting point at Mineola, fifteen miles away, piloted by Walter C. White.

Despite the heavy rains on Wednesday, which had brought the oil to the top of the roads and caused a number of skidding mishaps, the course was in excellent condition. Men, women and children in automobiles, carriages and on foot, began to gather at the Bull's Head turn at daybreak, and sought points of vantage. Chairman Morrell was one of the earliest arrivals, passing in his big touring car on a trip round the course, to see to it that the deputies, the flagmen and others assigned to duty were in their places. A red flag meant a clear way for the automobile and danger for the public. A yellow flag meant a clear course—proceed at full speed.

The road leading up to the turn had been particularly well oiled and the dust kept down remarkably well. Even when the big cars slid and plowed up the dirt as they tore around the corner, there was very little dust. All the cars approached the Bull's Head turn at a terrific rate of speed, having come over the straight stretch of six miles or more from East Norwich, on which some of the best time of the day was undoubtedly made.

The turn in the course is to the left, the road straight ahead, leading up a steep hill to Roslyn, while the right turn goes to Glen Cove. On the right of the road is the Old Bull's Head Tavern, directly across the street from which is an old residence; on the near left corner there is an open field, and on the far left corner a roadhouse. The turn is full 90 degrees, and it was necessary to greatly reduce speed in order to round it in safety.

When 5 o'clock, the hour for the start of the race had arrived, fully 200 people had gathered around the turn, while a large number of automobiles and carriages had been parked along the course, which was roped off. The crowd waited patiently, but with suppressed excitement, for the arrival of the first car.

Finally a small black object rushed into view in the distance. Almost as quickly as the eye saw it, it grew in size and continued to grow as the seconds went by. The spectators were at fever heat of excitement, and cries of "clear the road" were heard. Quickly the object took form, and almost

before anyone realized it a huge machine came tearing down the road with a terrific roar and rush. The front wheels scarcely seemed to touch the ground and the air vibrated with the sharp roar of the motor exhaust.

The big machine trembled as the brakes were jammed down to slacken speed for the turn, and then car No. 2, the big 60-horsepower Pope-Toledo machine, with B. F. Dingley at the wheel, dashed toward the corner, the mechanism, his features hidden by his goggles, hanging well out to balance the car.

The dirt and pebbles flew, as the tires churned through them, the big machine quivered for an instant, and the rear wheels skidded slightly; then, as Dingley threw the steering wheel around, the big car steadied itself, and in a second was disappearing down the road, leaving a slight cloud of dust and a filmy streak of oil smoke hanging in the fresh morning air.

It was just 5:46 o'clock when the car rounded the turn.

This machine gone, the crowd settled down to await the arrival of the next one. They were not kept in suspense long, for at 5:48 o'clock the Haynes car, No. 1, tore down toward the curve. Frank Nutt was at the wheel, and it was evident that he was not taking any chances. When about 100 feet from the turn the speed of the car was greatly diminished and it coasted around the turn, making a wide sweep. Once around, the power was again applied, and the car went away down the Back road at a tremendous pace.

There was a lull for a few minutes, no cars coming into sight, but at 5:54 o'clock No. 5, Dr. E. H. Thomas' Locomobile, driven by Joseph Tracy, came into view, and fairly flew down the course toward the turn. Tracy had been practicing at this corner for some time, and he dashed at it with speed scarcely diminished. The great car hung on the inside of the turn, careened slightly, and then with a skid of the rear wheels flew around and was off to the easy bend in the road a few hundred yards away.

At 5:59:30 o'clock the familiar cry of "Car coming—clear the road" was heard, and the Thomas No. 8, with Roberts at the wheel, was seen tearing down toward the turn. A second later it whizzed by at lightning speed and then the power was shut off and the brakes applied as the car slid around the sharp curve and instantly resumed its speed on the straightaway.

At 6:02 the Royal Tourist touring car, driven by Robert Jardine, rushed into view. The car took the turn at fairly high speed, but skidded badly, and gave the spectators along the paths on the right a bad scare, as it seemed for a moment that it must dash into their midst. Jardine righted it, however, and the machine sped off in the center of the road.

At 6:04:30 the Franklin car, No. 6, driven by W. F. Winchester, reached the turn. The car was driven along the level

stretch at a high rate of speed, but when about 100 yards from the turn the mechanic reached forward and cut out the ignition. The car's speed slowed up perceptibly before reaching the curve and still more as it struck it. The engine fired several times irregularly as the car coasted around the corner and the spark was then thrown on again and the machine continued at high speed.

A half minute later, or at 6:05, the Pope-Toledo, No. 12, driven by H. H. Lytle, came into sight, traveling at a high rate of speed. The driver was cheered as he approached the turn. It was evident that his engine was not working smoothly, as it missed fire continually and belched forth black smoke from the exhaust pipes, indicating too rich a mixture. He took the turn in good style, but that was the last seen of him at the Bull's Head corner. His car was reported out of the race and disabled shortly after this time.

At 6:19:30 Dingley, the leader, in the smaller Pope-Toledo, came into sight again, hitting up a terrific pace, and went by at a lightning speed, followed by the cheers of the crowd. It was on this lap that he made the most sensational turn of the day, his car skidding clear across the road, but being skillfully held on its course. He had evidently gained nerve from his experiences on the other turns.

He looked grim and determined in his goggles and skull cap and suit of khaki, and his face as well as his mechanic's was dirty and oil spattered, as were the faces of all the drivers after the first lap had been completed.

At 6:23 o'clock the White steamer, driven by Walter C. White, came into view and ran down to the White headquarters on the right hand side of the road and stopped, the mechanic calling for water. A can full was hastily emptied into the tank and the machine continued. Both White and his man looked troubled as they sped away. The difficulties that they were experiencing with the car were no doubt telling upon them.

At 6:26:30 o'clock, Joseph Tracy, driving the big Locomobile, sped past on his second round. He bowed and waved his hand in answer to the cheers that greeted him.

In another three minutes, Frank Nutt, driving the Haynes car, passed on his second lap. As he approached the curve, the mechanic was seen to pick up a small tube, which was bound against one of Nutt's ears, and talk to him. Nutt slowed the car down materially at the turn and then went ahead again at full speed. The engine seemed to be skipping spark.

On his second round Jardine, in the Royal Tourist, passed at high speed, making a spectacular and hair-raising turn and experiencing what for a moment promised to be a serious skid.

At 6:36 o'clock the Thomas car, driven by Houpt, reached the turn. The exhaust from the engines was smoky and the motor



SNAPSHOT AT MINEOLA TAKEN DURING THE ELIMINATION TRIALS SHOWING THE CROWD ON THE COURSE.

was missing fire. The speed of the machine did not appear to be greatly diminished, however.

When Dingley passed the corner on his third lap, his engine also skipped spark for a short time and then took hold again and the car dashed off out of sight.

Tracy, driving the Locomobile, passed on his third lap hitting up a terrific pace. His motor was giving out clean and sharp exhausts such as delight the heart of the motorist and tell of a steady and reliable power.

Nutt, in the Haynes, on his third lap took the turn carefully and rather slowly.

At 7:09:30 A. M. Jardine, in the Royal Tourist, passed on his third round, apparently running in excellent condition.

Roberts, driving the Thomas car, passed at high speed at 7:15 A. M. on his third lap. Half a minute later the 60-horsepower Christie car, entered by James L. Breeze, came into view on its first lap. The machine was going at a high rate of speed, despite the fact that the motor was missing fire and seemed to be giving trouble.

At 7:18 o'clock the White steamer again came into view, traveling at a slow rate of speed and apparently in trouble. The machine limped down to the White headquarters and stopped, and was immediately surrounded by a curious crowd, which poured forth all sorts of questions at White and his mechanic. The entire squad of White men rushed out to the car, and driving the crowd back, hustled the machine into the building, where it had been stored for the past week or more. It was evident that something serious was the matter, and ropes were stretched across the entrance to the place and officers detailed to guard the entrances with orders to allow no one in.

After working for ten or fifteen minutes, the mechanics announced to Mr. White that it was impossible to repair the damage done and that the car was out of the race. He was reluctant to believe this, but finally got out of his seat in the car, and in a most disconsolate manner removed his racing clothes. The order was passed that absolutely no one be allowed in the temporary

garage or near the car, and all of the White men positively refused to make any statement concerning the machine.

At 7:21 o'clock Dingley swept down the stretch on his last lap and took the curve at the highest speed of the day. He was loudly cheered as he proceeded down the road and out of sight. On his previous lap he had stopped at the tire tents just below the turn for water, but on the last round made no stop in that vicinity at all.

Tracy followed in the Locomobile at 7:27:30 o'clock, and at 7:40 o'clock Nutt swept by in the Haynes car. At 7:47 o'clock the Christie car came by on its second lap, but did not seem to be working properly and slowed up almost to a stop on the turn.

At 7:46 o'clock the Royal Tourist car sped into view on its last lap. The engine was missing fire badly and sheets of flame were shooting out of the exhaust pipes. It

was evidently a case of motor overheating, and Jardine stopped at the White headquarters and called for water, which was supplied him post haste, his tank being filled in less than a minute, and he was off again.

At 7:48 A. M. the Thomas car passed on its last lap, and was loudly cheered. Twelve minutes later, no other car having put in an appearance, the special guards and flagmen withdrew from the course, and it was again open to public traffic. The hundreds of automobilists hurried back to their homes, and the crowd quickly dispersed.

The general sentiment seemed to be that the drivers of all the cars had done remarkably well, but that they were either too sensible to risk their lives or had not the nerve to take the turns with the daredevil recklessness that the foreign drivers display in negotiating them.

## At the Angle in the Guinea Woods.

COMING down the Back road after leaving the Bull's Head corner, a sharp turn to the right in the Guinea woods brings one into the I. U. Willets road, which runs up through Albertson, where it crosses the railroad, and then beyond to Lakeville. At this junction is the only right-hand turn on the course, and it is, perhaps, the most dangerous. The turn is from a narrow road into wide space, the latter having been largely overgrown with brush and weeds before the race. These had been cleared off and the road rolled, but it had not been packed down by travel and the racing cars soon cut up the surface. The corner is not readily accessible, so on the morning of the race there were not more than twenty-five spectators stationed there, but those few saw the most exciting event of the day when the Royal car, No. 7, driven by Jardine, overturned, throwing out both the driver and the mechanician.

It is impossible to say just what caused this accident, which might have resulted seriously. It appeared to be due to skidding

or too sudden application of the brakes, or to a combination of both. The corner had been negotiated many times previous to Jardine's third lap, on which the accident occurred, and the loose gravel that was too generously sprinkled on the corner had been pounded down into deep ruts, which made it doubly difficult to get around safely. It was noticed that many of the cars slowed down materially at this bad turn, but Jardine adopted race track tactics and kept well over to the left as he approached and then cut across the turn to the right side of the street as he swung his car into the straight.

This maneuver on loose gravel may have caused the accident or it may not. It happened so quickly that it is impossible to tell, but Jardine was even quicker. He slammed on his brakes and jumped, as did his assistant. They were on their feet in an instant, neither hardly more than scratched, and Jardine cried to the crowd, "Hurry up and give us a lift, there must be another car right behind me."

Willing hands had the machine right side up and out of the way in a twinkling, and while spectators were remarking about the driver's coolness and quick wit, forgetting his own plight in the interests of the next racer, he was investigating the damage done. Quite as remarkable as his narrow escape from injury was the fact that practically no damage was done to the car. The radiator and bonnet were dented and the control levers required to be straightened, but at 7:18 o'clock, four minutes after the mishap, Jardine was away again on his remarkable run to third place on the American team.

The first car to come swinging down the road from the Bull's Head corner was Dingley in No. 2, the 60-horsepower Pope-Toledo. Everyone was expecting the Haynes car first, but Dingley passed at 5:50 o'clock, and Nutt, driving the 50-horsepower Haynes, at 5:52 o'clock.

Tracy, in Dr. H. E. Thomas' Locomobile, fairly tore around the turn at 5:58 o'clock, and at 6:05 o'clock Mortimer Roberts passed in good style in the 60-horsepower Thomas car. Jardine and Lytle then passed in that order at exactly minute intervals. The big 90-horsepower Pope-Toledo took the turn in fine style, staying close to the inside without any apparent tendency to skid, and everyone showed keen disappointment when the news came over the wire a few minutes later that he did not complete the circuit.

Following Lytle came the 60-horsepower Franklin car at 6:11 o'clock. Winchester was going very fast approaching and after the turn, but at the corner he swerved badly, although greatly reduced in speed at the instant of swinging into the Willets road.

The White car passed at 6:30 o'clock but did not come around again.

The Christie car went by for the first time at 7:21 o'clock, so it was evident that it had experienced trouble, which later proved to be the case. It was running well, but swerved dangerously at the turn. On his second round Robertson ran wide at the corner and seemed to be getting the hang of the thing, but he shut off his power too quickly and the Christie car came to a stop just as it struck the rise leading up to the railroad crossing at Albertson. The crowd soon gathered and was glad for the invitation to give a "boost." A few irregular explosions put the car out of reach at a bound and it disappeared, exploding regularly, a moment later.

On the third round Dingley, on rounding the curve, managed to stall his engine, probably by letting in his clutch too suddenly. There was a Pope supply station at this point, and there was an instant rush to his aid. His engine was started and he stalled it a second time. The third time he got away all right, however, but this incident delayed him about two minutes. When Dingley engaged his clutch the car seemed almost to leave the ground, showing an instant response or "life" that means so much in automobile racing.

It was very interesting to note the different methods used in rounding the turn. Most of the drivers kept the machine on high gear, pulled out the clutch on the turn and allowed the engine to pick up as best it could after the turn was made. This was especially hard to the engine, for there was a slight up grade of about two to three per cent. commencing at the turn. It also required very easy manipulation of the clutch in order not to stall the engine. Tracy's method in making the turn was in marked contrast to that of the rest. Just before reaching the turn and while slowing down for it, he changed back one gear and took the turn easily and at the same time hugged it very close. As soon as he had rounded it, he accelerated his engine, and did not return to his high gear till the grade had been surmounted. One could always hear

the gear click-in at the same spot. Both Jardine and Dingley took the turn at considerable speed and swung wide.

With the passing of the Royal car, No. 7, at 7:50 o'clock, on the last round, the race was as good as finished. Christie was reported to be still on the road but he did not come down again from Bull's Head. The crowd soon dispersed on foot, in wagons and in cars and the race was over.

Just as the representative of THE AUTOMOBILE was leaving his station a Pope-Toledo touring car came up towing Lytle's big racer. Lytle was sitting in his car, looking cheerful in face of his unexpected defeat. As he passed he reached over the side of his car and shaking hands, said: "There isn't much fun in being towed." He said it in a tone that showed his real feeling better than did his smiling face.

## Watching the Albertson "S" Turn.

**A**MONG the earliest arrivals at the S crossing, just west of Albertson Station, was the "trouble man." This individual was no bogey, and his appearance boded no ill for the success of the race. Rather the contrary, for he was detailed by the telephone company to locate and correct any fault that might arise in the working of the special call box installed at that point for use during the race. He was a young fellow who had ridden from Port Washington on his bicycle, bringing a tool-bag with him, and he was on hand not long after 4:30 o'clock.

This S crossing is a jog in the course where Willis avenue intersects the I. U. Willets road, and is in front of the farmhouse where the cars were weighed-in. Due to some surveyor's error, or for some other unexplained reason, the I. U. Willets road does not cross Willis avenue in a direct line, but the two ends of the course are about 100 feet apart. A grass plat in the center of Willis avenue prevents a driver from shooting diagonally across from one corner to the other and compels him to take an S-shaped course.

It had been rather expected that the first car would appear about 20 minutes after the start, scheduled for 5:15 o'clock. Two fast cars did appear about 5:30 A. M., one trailing the other closely; but they carried gas lamps and turned out to be touring cars, apparently making the circuit to see that the course was clear. It was not till 5:50 o'clock, when the sun, a big red ball, was just above the horizon, that the waving red flag by Albertson Station announced the approach of a racer, and the crowd, sure that this was not a false alarm, scattered from the road.

It was No. 2, the 60-horsepower Pope-Toledo. It slowed down for the turn, just enough to show that Dingley knew how to make a quick turn without upsetting; then it whisked around, raising a small cloud of dust at the edges of the oiled strip, and with a rattle of exhausts, scrambled around the

reverse turn, and was off down the straight road to westward.

Four minutes, and Frank Nutt came along with the Haynes. One automobilist, who had come with a French car to see how the American drivers got around that curve, laughed derisively. "That's a touring car!" he said. So it was, but for a touring car it was "going some." Nutt was taking no risks, however, and he made the turns slowly, with his spark shut entirely off till the first turn was past.

Later observation of the manner in which the several drivers took the curve showed that nearly all slowed down by throttling, the motor running with intermittent explosions, and the brakes not being employed more than necessary. The motor, therefore, acted as a brake, and the clutch was not released unless (or, rather, until) skidding commenced.

As a matter of fact, nearly all the cars went around fast enough to skid more or less, and by skidding they lost so much speed that there was no difficulty in putting on full power for the second turn, which was much less abrupt. The oiled strip followed the center of the road on both turns, but practically all the drivers swung wide to the left on approaching the first turn, and then cut the corner sharply, so that for some yards after beginning to turn, they lost the benefit of the oil.

After Nutt came Tracy with the Locomobile, followed by Roberts, with the Thomas, who had lost about three minutes to Dingley up to this point. The Royal was just behind, and seventeen minutes after Dingley came Lytle with the 90-horsepower Pope-Toledo, a minute ahead of Dingley on elapsed time.

Then the yellow Franklin appeared, its eight-cylinder engine bare of bonnet or other covering. Its speed was somewhat less striking than its appearance, and something appeared to go wrong with the mixture at the first turn, for it slowed down ex-

cessively, and finally stopped an instant just around the turn, emitting a cloud of blue smoke while Winchester readjusted things, and put in his low gear for a fresh start. Evidently something worse than carburetor troubles befell it later, for it did not again appear.

Nothing was seen of the two Mathesons and the Premier, and Dingley had passed a second time, having made the circuit in about 31 minutes, before the gray White steamer came in view. Walter White showed his lack of practice by not slowing down sufficiently, and being obliged to make the first turn with his brakes still on.

Tracy's second appearance, 8 1-2 minutes after Dingley's, showed that he was holding his own, though he had not made up the loss of two minutes which he had in some manner suffered between the start and the first traversing of the S turn. His speed seemed to be less, but a study of elapsed times showed that this was due mainly to the fact that he slowed down more for the turn, for his times by circuits varied only by seconds from 30 minutes, except the first, which was a minute slower. He was evidently not letting out his car, feeling sure of a place on the team, barring accidents.

Dingley, on the contrary, took the turns in hair-raising style, though very cleverly, and seemed to be driving for first position, which he finally won. As the two were less than a minute apart on elapsed time at the finish, they did not see each other during the race.

The flagging arrangements at Albertson were well planned and successfully carried out. As the red flags announced

ing a clear course to the races acted to stop any approaching trains, it only remained to give the racers the right of way at the crossing and show a white flag when the track was clear for a train. As it happened, no interference was suffered by trains or racers, though at one time a long freight train passed.

At 7:20 o'clock the Christie car came by, and again at 7:53 o'clock. After the race it was met going west on the Jericho Turnpike.

The five cars which finally qualified came by at fairly regular intervals, save the Thomas, which was missing badly on its third appearance and worse on its fourth. It was the last car to go by. Dingley, on the other hand, increased his speed, making the last round in the surprising time of 28 1-2 minutes, the best (timed from that point) of the day.

Toward the end there came a circumstantial rumor that the Royal Tourist had upset at the right turn east of Albertson, and had been righted again and started on. Its radiator filler cap was missing on its last round, but it seemed all right otherwise, and its times by rounds, taken at Albertson, had varied but little, the last being 36 1-2 minutes, as against 33 1-2 for the first; so that the rumor seemed too incredible for belief.

At 7:52 o'clock the Thomas, having made its final appearance, the telephone announced that the race would close with the finish of that car. The exodus of spectators had begun 20 minutes earlier, after Tracy had come by, and it became apparent that he was not likely to gain first position. By 8 o'clock the S turn was deserted.

## At the Risky Lakeville Turn.

THE turn at Lakeville is one of the most dangerous points of the course; the last quarter-mile stretch of the I. U. Willets road meets the Lakeville road at an acute angle, only 56 degrees; and as there is an up grade from the turn to Lake Success it was desirable to hold the speed if possible. Both roads were in good condition, but no banking or special preparation had been attempted; in fact, it would seem that this particular spot had received much less attention than its importance called for.

The driveway to the Lakeville Inn yard, some twenty yards east of the turn, was marked by two big boulders in the roadway and inside the gutter; as it proved just at the spot where the cars swung outward in beginning the turn. These stones were in place until after 5 o'clock on the morning of the race, and they were only rolled aside then on the suggestion of an outsider; a car striking either would inevitably have been wrecked. The Lakeville road begins with a cut, banks about six feet high on each side; there are several trees and large telegraph poles along the west or right-hand bank, but partly back

from the gutter; at the edge of the gutter, however, are two telephone poles in positions where they are liable to be struck; in fact, the Christie car, on her first round, barely missed the first pole. As these are dead poles, with no wires, they may be removed, and this should certainly be done before the big race.

The school-house grounds at this point, commanding a good view of the approach and immediately over the turn itself, were crowded with women and children, lined along the fence at the top of the bank, in fancied security, though only a few feet distant from the cars as they swung in. As the bank is from five to six feet high, and would probably be struck obliquely, it is possible that a runaway car might not mount it; on the other hand, if such a thing should occur, there would be a very serious disaster. It would be a wise precaution to keep this point, immediately over where the cars swing in, clear of all spectators. The continuation of the I. U. Willets road was roped off in a line between the Lakeville Inn and the opposite corner, the space back of the rope being crowded with spectators,

some with bicycles, while cars were parked back of the crowd. A car which for any reason ran wild and failed to make the turn would charge into this crowd. Two lines of ropes are needed at this point, the inner one as on Saturday and the outer some distance back from it, the space between being reserved exclusively for the press and photographers, whose duties make it imperative that they shall take risks in standing as close as possible to the actual path of the cars. In the event of a runaway there would be space for them to run, while the main crowd would be kept at a reasonably safe distance. Anyone who has watched a crowd of this kind can imagine the result of a panic among women and children, especially where there are bicycles everywhere to trip up the runners.

The Lakeville Inn has achieved local fame as the headquarters of the Locomobile, and every man, woman, and child about this part of the countryside is an adherent of Joseph Tracy and an admirer of the big No. 5; after the race men, plowing in the fields toward Albertson, stopped their teams to call out an inquiry whether Tracy had won. The force regularly employed in assisting Tracy for the last few weeks was largely augmented on Thursday and Friday; in fact, a very large section of Bridgeport was temporarily transferred to Long Island, all the officers of the Locomobile Company being quartered at the inn, with a small army of mechanics; to these were added a detachment of tiremen from the Diamond Works at Akron, Ohio.

On Friday afternoon the last touches were put on the car, the work continuing until after dark; the armored tires used in the last trial runs on the wet roads were replaced by plain ones, and every part of engine and chassis was inspected, and, if necessary, adjusted by mechanics from the shop under the watchful eyes of Tracy and Al. Poole, his mechanician. During the afternoon Tracy was out for a final run over the course in a touring car, returning before dark.

The two roads from Flushing and Great Neck were alive with cars of all descriptions, carrying visitors to the various hotels along the course, the procession growing as the day declined; most of the locomobiles as they came up turned into the inn yard, and by supper time every department of the company was well represented. The evening passed very quietly, the only disturbance being the arrival of a racing car at about 10 o'clock, running fast from the eastward without lights, except the flashes from its exhaust pipes, accompanied by a terrible racket. Rushing up to the turn it stopped short, started, stopped, turned and dashed to and fro, then made a final rush out of sight along the Lakeville road. It was the Thomas car, evidently testing its brakes, which had been readjusted at the weighing-in.

Tracy turned in a little after 9 o'clock and every effort was made to keep the place quiet, in order that he might sleep. Men

sat about the piazzas and talked quietly, cars flashed by from the north or west, now and then a new arrival created a little stir; at last those who were lucky enough to have beds, or substitutes for them, turned in, leaving the usual flotsam and jetsam to pass the rest of the night at poker.

Nearly everyone left orders for a call before 4 o'clock on Saturday morning, but this proved a most useless precaution. Before 3 o'clock the diabolical bark of the Thomas car awoke all the north shore, and it began its infernal gyrations about the inn. Further sleep was impossible, and as the chug-chug of the passing cars became less intermittent one became eager to be up, even though there were hours of tedious waiting ahead. At 3:30 o'clock the air was dry and clear, with no fog here, moon and stars shining brightly; the good northwest wind, which had done so much at the last moment to put the roads in shape, was still blowing, but too lightly to make a hindrance to speed. Though but few were stirring at this time, the number rapidly in-

"Left Hand Turn," and near it was a man with a red flag, another being stationed midway to the turn; beyond the turn on the Lakeville road were two more flagmen. A dozen or more cars were parked near the inn, with some horse vehicles.

A half hour passed in uneasy expectation and then came the cry of "There she comes!" and the first car appeared around the turn. As she came up the number showed her to be the Pope-Toledo instead of the expected Haynes, and conjectures were rife as to the delay of No. 1. Swinging out a little on the approach, she took the curve at a good speed and rounded very neatly, her time being 5:55:00, or, as it afterward proved, twenty-three minutes from the start.

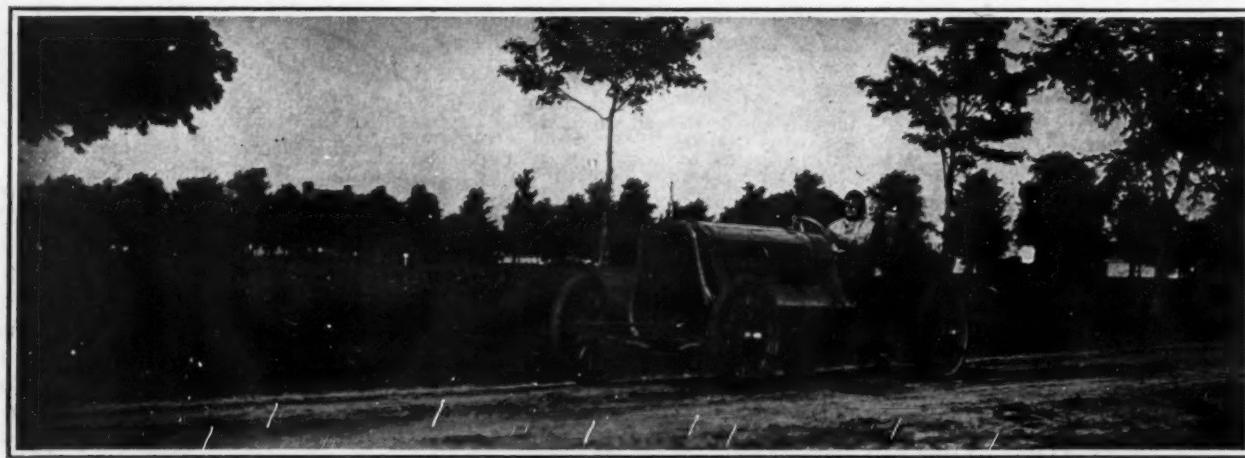
Among the first to succumb to the excitement which a race of this kind awakes in even the most casual spectator was the V. D. already mentioned; with the appearance of the first puff of gas around the curve his views of Road Racing *vs.* Public Rights underwent a sudden change; he

ute later came Lytle in the big Pope-Toledo, making a clean turn at moderate speed.

The Franklin car at 6:16:15 took the turn slowly, and then there was a wait of ten minutes before the smaller Pope-Toledo came by on her second lap. She made a good turn, being unofficially timed at 6:26:05, which makes her time for the full round to this point 31:05; practically the same as the official time for the actual round starting and finishing at the grand stand.

The next to pass was Tracy, at 6:35:05, making a particularly clean turn at good speed; his time for the round figured out 31:05, or eight seconds less than the official round. At 6:37:30 the White steamer passed on her first round, making a good turn. When the Haynes came up at 6:39:10 she made a very good turn, and Nutt shouted out, "That's better!" to the spectators.

Though there were quite as many casual spectators as practical motorists in the



LYTLE IN THE POPE-TOLEDO NO. 12 IN A PRACTICE SPIN PREPARING FOR THE ELIMINATION TRIALS.

creased; mechanics and tiremen breakfasted quickly and departed to their various stations, the personal attendants of the racing car took her in hand for the last touches, and the various officials appeared with their badges, flags and megaphones.

A little before 5 o'clock Tracy left for the start, taking the wheel of the towing car while Poole held the wheel of No. 5. Promptly at 5 o'clock the roadway was roped off, in spite of the bibulous eloquence of the village drunkard, who discoursed most feelingly upon this outrage upon the rights of a free community. As car after car came up, bound for the starting point, they were turned off to the west to the next open road, while all vehicles, as they approached along the course from either direction, were compelled to leave it. By 5:30 o'clock there were, probably, a couple of hundred spectators on the inn grounds, in the roadway back of the rope, and on the school-house grounds opposite, the inner corner being kept clear by the officials. A quarter of a mile to the east, along the L. U. Willets road, was a banner stretched over the roadway, bearing the inscription,

shouted with enthusiasm as Dingley took the curve, and from this time on he devoted himself to a keen criticism of each operator.

Four minutes more and the Haynes was sighted, coming up fast and swinging wide on the approach, taking the turn with a long radius and hitting the bank as she entered the Lakeville road. The turn was a very poor one and almost brought tears to the eyes of the V. D.

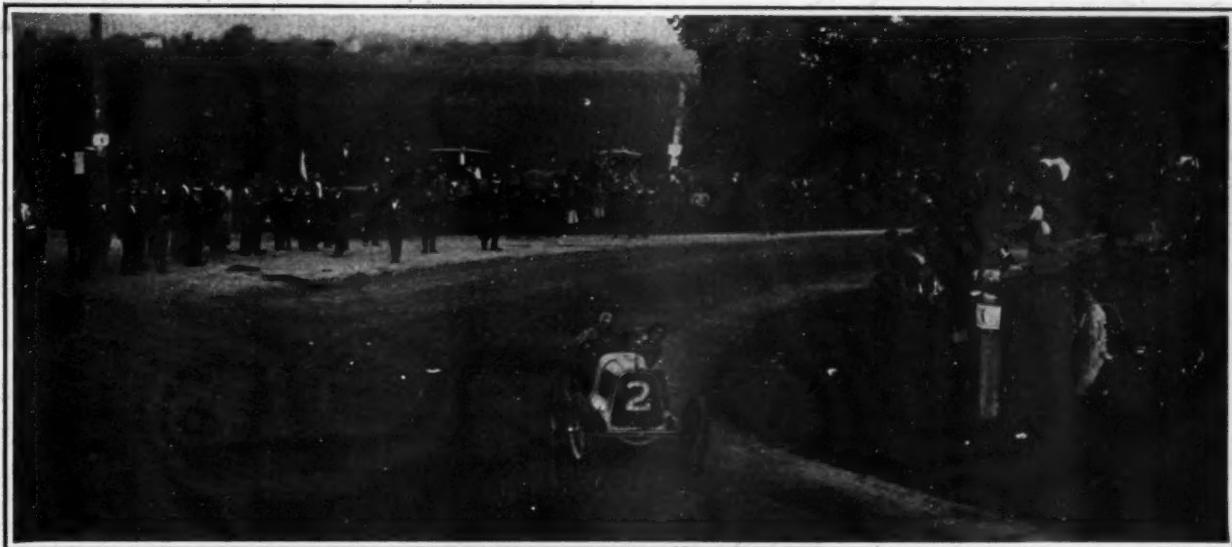
While the special telephone was working nothing was known of the interval between the cars and other details of the start, and both Matheson No. 3 and White No. 4 were expected ahead of the Locomobile. When the third car came in sight, however, it was soon recognized, and a yell went up for Tracy. The turn was made very neatly, the time being 6:04:00, the car running fast.

The next car was heralded by a roar that told of the Thomas even before her bright red color was distinguishable; she made a good turn at moderate speed, the time being 6:09:10. When the Royal Tourist came up at 6:10:30 she slowed down and made only a fairly good turn. Just a min-

crowd, the popular judgment of a driver's skill was very correct, and a particularly good or bad turn was met with an instant expression of approval or the reverse. Jardine made a good turn when he came round at 6:44:05 for the second time, making the round to this point in 33:25. On his second round Roberts held his speed, ran close to the bank and skidded, but made the turn safely; he was timed at 6:45:55.

Dingley still led the third round, getting a cheer from the crowd as he made a very good turn at 6:59:30. As the times of the start were unknown, it was impossible to figure the elapsed time for the first round, which it seems was made by Dingley in 27:58, but when Tracy went by for the third time at 7:05:20 he had made the round in 30:15, the fastest thus far shown at this point.

Nutt made a good turn on his third round at 7:13:55. The Royal Tourist was in trouble as she came up and the cap of her radiator flew off as she neared the turn; the water apparently flew into Jardine's face, for he steered wild and struck the bank as he entered the Lakeville road. She was timed



DINGLEY HUGGING THE TURN AT HYDE PARK INTO THE STRAIGHTAWAY TO THE GRANDSTAND.

at 7:18:40. The Thomas turned at 7:23:25.

No one expected now to see the Christie car, but she came into view at last, making a poor turn and barely missing a telephone pole, being timed at 7:25:10.

Dingley passed for the last time at 7:27:40, the elapsed time for the round being 28:10, or exactly the same as the official time. Tracy followed at 7:34:50, making 29:30 elapsed. The Haynes made a poor turn though, running slowly, at 7:47:40.

Jardine went by for the last time at 7:55:05, and at 7:57:25 the Christie car went by on her second round with a bad squeak in her machinery. The last to pass, at 8:00:35, was the Thomas.

The times, as unofficially taken at this point, make a very interesting comparison with the official times from the starting line, showing the remarkable regularity of the running and the even nature of at least a part of the course.

even the officials, knew the actual weights of the cars. In weighing the cars for this year's elimination trials, however, exact weights were taken, and anyone who could get near enough could see for himself the scale readings. Many expressions of satisfaction were heard regarding this open method of weighing-in.

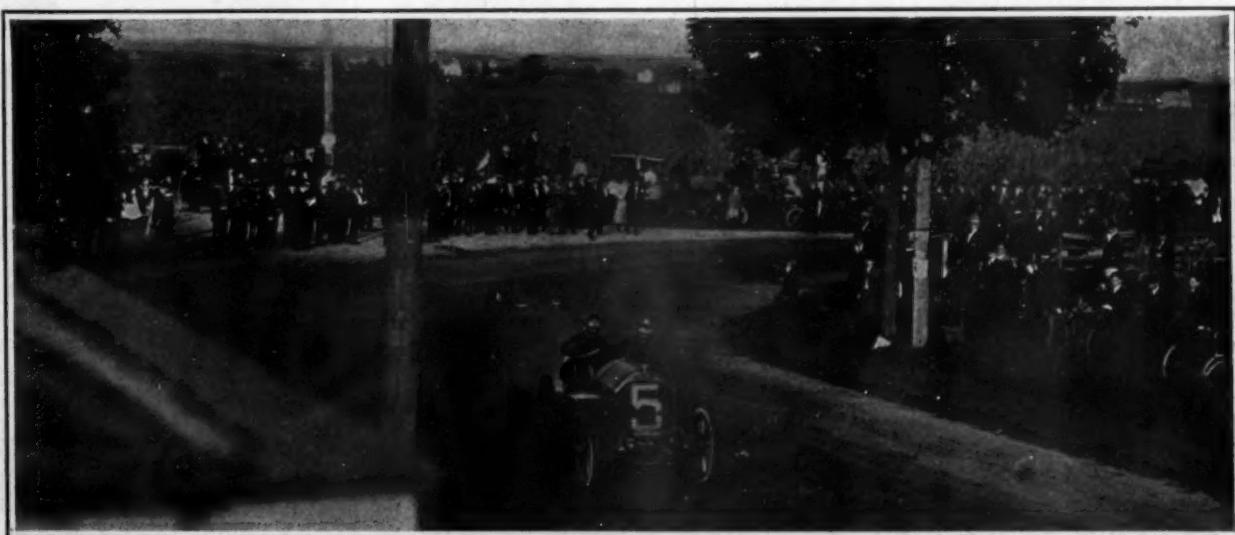
Weighing-in progressed slowly, so that the entire day—Friday, the day before the trials—was occupied in the weighing of the eleven cars that were brought to the scales. The scene presented a sharp contrast between the quiet monotony of rural life and the ultra-modern "strenuous life" typified by the racing cars. The cars, grouped in the large, well-kept barnyard, seemed to have nothing in common with their surroundings; and yet there was in the machines a deeper interest for the farmer and his sons than they realized. As one of the spectators expressed it: "This is one step in a movement that means more to the farmers than they now realize."

The first car to appear at the scales was

## All Weighed-in Except One.

THE weighing-in of the cars—that important but quiet ceremony that causes the designer so many anxious thoughts—took place at Albertson's farm, located on Willis avenue at the little jog in the I. U. Willets Road on the north leg of the course, about a quarter of a mile west of Albertson station on the Long Island Railroad, where the course crosses the track. Here was an excellent scale which had the advantage of being entirely under cover,

with the graduated beam facing the platform, in plain sight. The scale used for the weighing-in for the first Vanderbilt cup race was at Garden City; the platform was out of doors, while the beam was within a building, where only the officials could read the weight. The method of weighing adopted then was to set the scales at the maximum limit—2,204 pounds—and pass every car that did not raise the beam. As a result of this arrangement no one, not



TRACY IN THE LOCOMOBILE No. 5 SWINGING INTO THE JERICHO TURNPIKE AT HYDE PARK.

## THE AUTOMOBILE.

September 28, 1905.



SIGNAL MAN NEAR CORNER WITH FLAGS.

Walter Christie's front-drive racer. The car tipped the scales at 2,000 pounds, and satisfied the officials. Messrs. R. H. White, Riker, Birdsall and Miles, as to its braking powers, its reversing gear and general facility of handling; but the exhaust, directed toward the road surface, stirred up such a tremendous dust that the car was sent back to have this defect remedied before being finally accepted. The machine disappeared down the road toward Mineola, raising a cloud of dust that hid it from sight and trailed it for nearly a quarter of a mile. Late in the day the car returned with the exhaust shooting harmlessly into the air, and was passed and stamped officially.

The Franklin—"a long string of cylinders on a wooden stretcher," as one spectator put it—was weighed at 2,182 pounds and passed a satisfactory test. After a long interval of waiting the Royal appeared, and was weighed and tested to the satisfaction of the officials, the scales showing the weight to be 2,190 pounds. The long-drawn-out six-cylinder Thomas car was the next, weighing 2,180 pounds. In testing the brakes of this car it was found that the bands did not hug the drums closely enough to give the requisite braking power. This was soon remedied, however, and the car accepted and stamped. The Haynes, the holder of the coveted No. 1, was the last car weighed before luncheon, and tipped the beam at 2,198 pounds.

The two Pope cars were weighed immediately after luncheon; the four-cylinder car weighed 2,198 pounds, while the six-cylinder machine just touched the maximum limit.

The Locomobile when weighed was found to be twenty-three pounds over weight, after making the official allowance of fifteen pounds for the magneto, this car being fitted with low-tension ignition apparatus. In the paring down process which followed a large sheet metal tool-box was removed from its place behind the gasoline tank at the rear of the car. The machine was again weighed and found to be several pounds less than the maximum. But Joseph Tracy,

the driver of the car, was disconsolate at the sight of his tool-box lying on the grass, and he held a short consultation with Al Poole, his mechanician. As a result, the footboards were removed and replaced by a diminutive footstool bored full of holes; the step and the canvas mudguard on the mechanician's side came off; the tires were carefully washed, to remove sand and dirt, and nooks and corners of the frame were dusted with scrupulous care. Again Tracy put the car on the scale, and this time the weight was just within the limit, notwithstanding the presence of the coveted tool-box. The driver's face immediately assumed an expression of contentment, and

however, and after being weighed at 2,184 pounds and receiving the same road tests as the other cars, it was accepted and sent back to its garage.

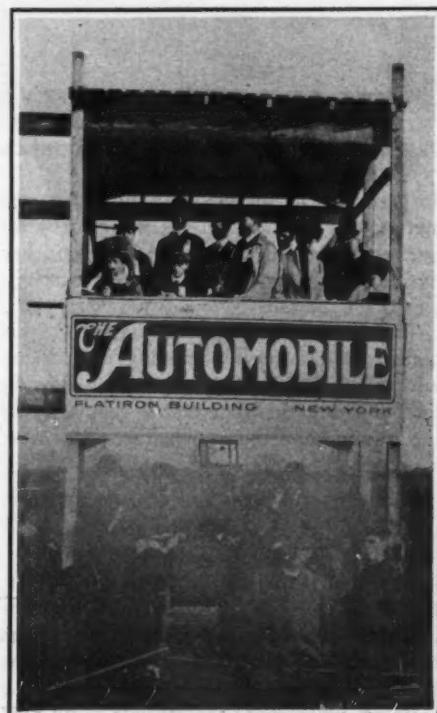
The Premier, the second air-cooled car entered for the trials, did not put in an appearance at the scales. It was reported that the weight of the car could not be brought within the official limit. Considerable interest was felt by automobilists in this car, which is peculiarly constructed, and is said to have considerable power; and many who were anxious to examine the machine expressed disappointment at its failure to appear.

The following are the official weights of the cars that were presented for weighing-in at Albertson:

Haynes, No. 1, 2,198 pounds; Pope-Toledo, No. 2, 2,198 pounds; Matheson, No. 3, 2,188 pounds; White, No. 4, 2,184 pounds; Locomobile, No. 5, 2,204 pounds; Christie, No. 6, 2,000 pounds; Royal Tourist, No. 7, 2,190 pounds; Thomas, No. 8, 2,180 pounds; Franklin, No. 9, 2,182 pounds; Matheson, No. 10, 2,196 pounds; Pope-Toledo, No. 12, 2,204 pounds.

## Details of Franklin Racer.

The Franklin eight-cylinder, 60-horse-power racing car conveys an impression of lightness that is deceptive, for the official weighing showed the machine to be but 22 pounds less than the maximum weight limit of 2,204 pounds. The frame is of wood, with angle steel strips running along the inside of each longitudinal member to add stiffness. The cross frames are of angle steel, of light appearance, and help



"THE AUTOMOBILE" STAND NEAR STARTING LINE IN ELIMINATION TRIALS

Mr. Riker laughingly remarked: "Tracy's happy now; he's got his tool-box."

The next cars weighed were the Matheson twin machines. No. 3 was found to be fifty pounds too heavy; but this was explained when someone noticed that the radiator was full of water. The water was run out, and the car then scaled 2,188 pounds, this including a small extra gasoline tank which was added to the equipment. The second Matheson, No. 10, weighed 2,196 pounds, and also carried a small extra tank. Both Matheson cars had magnetos, for which the regular allowance of fifteen pounds was made.

Half an hour after the Mathesons were passed the Christie car returned with its exhaust pipes altered, and was accepted. The last car to appear was the White steam racer. This car had been delayed to repair damages caused by a collision with a telegraph pole early in the morning, and for a time there was doubt as to whether the work could be finished in time for the weighing-in. The work was done in time,



RACE OFFICIAL AT FIELD TELEPHONE.

to support the motor. An aluminum racing body, jacketless cylinders and the general skeleton-like construction of the car tend to make it look light, so that considerable surprise was expressed at the weighing-in when the weight proved to be so near the limit.

In general the engine resembles two magnified Franklin four-cylinder motors set longitudinally with shafts rigidly coupled together. The valves opening into the cylinder heads are mechanically operated, and auxiliary exhaust ports are used, as in the smaller Franklin motors. The cooling flanges on the cylinders are extremely thin and very close together; and on inspection it develops that most of the flanges are of copper, only a few near the bottom being cast. The cast flanges are naturally thicker and wider spaced than the copper ones. Bore and stroke of the cylinders are each five inches.

Propeller shaft and bevel-gear transmission is employed, a metal-to-metal clutch and a Brown-Lipe sliding gear change giving two speeds being placed in the usual relative positions. The wheels are 36 inches in diameter and fitted with 4-inch tires; the wheelbase is the longest of any of the cars entered in the elimination trials except the White car, being 128 inches. Hub brakes and a transmission brake are fitted, the hub brakes being operated by a hand lever and the transmission brake by a pedal. Springs are semi-elliptic all around.



BANNER ACROSS THE ROAD IN GUINEA WOODS GIVING WARNING OF TURN.

The gasoline tank is placed on the dashboard on the engine side, and gives a good head of fuel, owing to the height of the tank. High tension ignition is used, there being a coil for each cylinder and two storage batteries; a single timer at the rear end of the motor distributes the current to all cylinders.

The great length of this car, its long motor and the light character of the framing caused some persons to express the fear that twisting would occur and cause binding of the engine shaft, which is made continuous throughout its length by a rigid sleeve coupling between the two crankcases. It is stated, however, that trouble in this respect has never been experienced with the Franklin car.

the matter that despite the regularity of their running the two touring cars had not sufficient power to enable them to make a favorable showing in the race for the cup against the high-powered foreign cars, and they took refuge behind the announcement that had been made to the press the week before to select the American team as they saw fit, regardless of the order of finish in the elimination race. It was the consensus of opinion that, barring such mis-haps as occurred to Lytle's Pope-Toledo, the White and the Christie in last Saturday's event, these three cars were fast enough to stand a reasonable chance to win the cup for their country.

Although a closed meeting, the meeting of the commission was not a secret session, for the public and newspaper representatives are not admitted to any of the race commission or A. A. A. racing board's meetings. Representatives of the Haynes, Royal and Thomas cars were present in the club rooms during the meeting, but were not invited to present any arguments against the action before it was taken, and it is said on good authority that they made no demands to be given a hearing before the decision had been reached. The secretary was directed to ascertain from E. D. Shurman, who entered the Royal, and V. E. Minich, general manager of the Haynes Automobile Company, whether or not they were willing to withdraw their cars in favor of two of the others, but they stated emphatically that they were not. The decision was then announced before they had opportunity to enter protests.

During the meeting a long letter from H. S. Houpt, entrant of the Thomas car, which contained a statement from Montagu Roberts, driver of the car, stating the reasons for its failure to make a better showing in Saturday's race, was circulated and read by all members of the commission present, but it had no effect in changing the decision. The Christie car was chosen for one of the team of five cars upon condition that Walter Christie would drive the car himself in the race on October 14.

The members of the commission present at the meeting were: Robert Lee Morrell, chairman; William K. Vanderbilt, Jr., donor of the trophy; James L. Breese, E. R. Thomas, A. L. Riker, E. T. Birdsall, T.

## Three Substitute Cars Named for Cup Team.

THE six-cylinder Pope-Toledo, the White and the Christie front-drive racing car were substituted on the American team for the Vanderbilt Cup race in place of the Royal Tourist, Haynes touring car and Thomas six-cylinder racer that finished third, fourth and fifth respectively in last Saturday's elimination race, at a closed meeting of the cup race commission held from 4 to 6 o'clock Monday afternoon in

the rooms of the Automobile Club of America on Fifth avenue, New York. The commission took advantage of the right it had reserved to select the American team in any way it saw fit, and ignored in part the results of the test race in naming the team.

The secretary for the commission was not authorized to give the reasons that led the commissioners to their decision, but the commissioners had decided after discussing



CHRISTIE FRONT WHEEL DRIVE CAR NO. 6 AT THE WEIGHING-IN.

## THE AUTOMOBILE.

September 28, 1905.

M. Hilliard, F. C. Donald, E. H. Green, S. M. Butler and Secretary A. G. Batchelder. The members who were absent were: Rollin H. White, H. L. Bowden, William Wallace, George Isham Scott and R. Lincoln Lippitt.

During the voting both James L. Breese, who entered the Christie car, and A. L. Riker, designer of the Locomobile, retired from the room.

Representatives of the disqualified cars, including the manufacturers, the men in whose names the cars were entered, and the drivers who took part in the race, are much wrought up over the action of the commission. They point out that their cars developed no mechanical defects, and maintain that they are quite as likely to make a good showing in the race for the cup as the other cars that were practically put out of the running in the first two rounds of the elimination race. To the newspaper men Harry Houpt said:

"I have spent a lot of money to win for the Thomas the chance to gain a place on the American team. I have earned the right to go against the foreigners, and I think it unfair to rob me of it. We did our first lap in 30.53—time which was beaten only by Lytle and Tracy. In the first round a battery box broke. Later on the other box upset and spilled the acid. That was why we finished the last lap so slowly."

V. E. Minich, of the Haynes company, said:

"If we were to be robbed of the fruit of our victory, why was our money taken, if the winners were to be picked regardless of the elimination trial? We went into the contest in good faith. We paid \$500 entrance fee, and put forth the best efforts of our factory in constructing the car."

The following telegram was received from E. D. Shurmer, president of the Royal Motor Car Company, on Tuesday, in response to a message of inquiry regarding his opinion of the commission's action:

THE AUTOMOBILE, NEW YORK.

"Answering your telegram; if the newspaper report is correct that the Vanderbilt Race Commission has ignored the result of the eliminating trial and proposes to bar the Royal car from the cup race, we shall certainly protest. If, as reported, the commission intended to bar regular touring cars and only admit freak racing machines, why were entrances of regular touring cars ever accepted for a trying-out contest? Acceptance of entrance money under such conditions would be little better than fraud. We cannot credit the report that a commission having two members representing unsuccessful cars would substitute their cars for rivals which had proved successful in a fair competitive trial. The Royal car took third place notwithstanding capsizing at a turn and consequent delay, besides which the Royal is capable of much better time than that shown in the race; but, having secured his place among the five successful contestants that would be selected,

## PRESENT COMPOSITION OF VANDERBILT CUP RACE TEAMS.

American Team, Representing the American Automobile Association.

CAR.	H.P.	OWNER.	DRIVER.
Pope Toledo	60	A. L. Pope	Dingley.
Locomobile	90	Dr. H. E. Thomas	Tracy.
White	90	R. H. White	White.
Christie	60	J. L. Breese	Christie.
Pope Toledo	90	Col. A. A. Pope	Lytle.

French Team, Representing the A. C. of France.

Panhard Levassor	120	Panhard & Levassor	Heath.
De Dietrich	130	M. de Dietrich	Duray.
Darracq	80	Darracq & Co.	Emery.
Darracq	80	Darracq & Co.	Wagner.
Renault	90	Renault Bros.	Sisz.

German Team, Representing the Deutscher A. C.

Mercedes	120	Baron de Caters	De Caters.
Mercedes	120	C. G. Dinsmore	Werner
Mercedes	120	Foxhall P. Keene	Keene.
Mercedes	120	John B. Warden	Warden.
Mercedes	120	Robert Graves	Jenatzky.

Italian Team, Representing the A. C. of Turin.

Fiat	110	Hollander & Tangeman	Lancia.
Fiat	110	Hollander & Tangeman	Chevrolet.
Fiat	110	Hollander & Tangeman	Nazzari
Fiat	90	Hollander & Tangeman	Cedrino.
Fiat	90	A. G. Vanderbilt	Sartori.

Jardine made no effort to crowd his machine. We await official advice.

(Signed) "THE ROYAL MOTOR CAR CO.,  
E. D. Shurmer, President."

E. R. Thomas, builder of the Thomas entry, made the following statement when seen by a representative of THE AUTOMOBILE on Tuesday in New York:

"I sincerely hope that the action of the Vanderbilt Cup Race Commission, in rejecting three of the cars that qualified in the elimination trial and nominating three that did not even finish the contest, will be justified by results, and that some American will win back the Vanderbilt cup. In view of the cold facts of the case, however, I am compelled to doubt the wisdom of the course adopted in selecting as one of the team a car of a type that has not been accepted as practical by American manufacturers, and of which only three, I believe, have been built. At no time have these machines shown reliability and consistency in long-distance running. I believe that the action of the commission in substituting a car of this character for the Thomas machine, which made the fourth fastest round in the elimination trials and has proved its speed and reliability in many a contest, will be resented by all American manufacturers who care to express opinions on the subject. The machine that takes the place won by the Thomas is not a representative American machine, and has never proved its reliability in long-distance work, though I fully believe its designer to be possessed of mechanical ability of a high order. It, however, requires years of experience and the output of hundreds of cars and exhaustive tests under all conditions in the hands of various operators to enable a manufacturer to produce a car that can be

called a thoroughly reliable machine. Speed is only one of the necessary qualifications for a car entered in a long-distance race; reliability is really a more valuable factor, as was shown by the fact that a 24-horsepower car in the first Vanderbilt Cup race was still running strongly in third place when the race was stopped, while many cars of much greater horsepower and speed went to the wall.

"Not for one moment do I believe that any member of the committee deliberately sacrificed the Thomas car because some of the members owned or represented competing machines. I claim, however, for the same reason that no judge will sit on a case in which a friend or relative is interested, on account of the unconscious prejudice that may exist, that no manufacturer or his representative should be allowed to hold a position on any committee, because he is sure to have preconceived ideas, regardless of results.

"Probably the spirit of commercialism has been absent more conspicuously in the case of the Thomas car than any other entry. The car was owned by Harry S. Houpt, of New York, and Mr. Houpt paid all the expenses of the preparations for the race, which, I can assure you, were heavy. He went into the race in a spirit of pure sportsmanship, for the honor and glory of winning the Vanderbilt cup, if possible. Personally, I have taken very little interest in racing matters, believing that manufacturers can easily expend all their time and talents in the construction of cars for public use. Such machines are naturally different in construction from racing machines.

"As to what my position will be in the future with regard to racing, I may say that my influence will always be used against

the entry of a Thomas car in any race in which a competitor, or the owner or representative of a competing car, is an official."

The State Engineer's Department of the State of New York has issued a book known as the New York State Red Book of 1905, containing a large amount of information concerning the roads of the state. The amount of time and money expended on road work by each of the 1,000 towns of New York is given in detail, together with the amount of money available in each town per mile of road. The population per mile of road is also given. In addition to these facts and figures there is a great deal of valuable information concerning road building and maintenance, cutting weeds and bushes, opening drains, building sluices, and so on. Any person who desires a copy of the Red Book can obtain it on request from the State Engineer's Department, Albany, N. Y.

Furnishing current from an electric automobile for stereopticon views is something unusual, but this is what occurred at the Chautauqua grounds on Saturday evening. It was discovered late in the afternoon that the current furnished by the Milwaukee Electric Railway & Light Company, 550 volts, was too heavy for the apparatus used in producing the pictures, and it was about decided to give up that part of the entertainment, when Mr. William Lund, who had charge of the apparatus, said that if someone would loan him an automobile operated by electricity, he could so arrange the voltage as to give the views. Mr. F. Lee Norton kindly loaned his machine, Mr. Lund regulated the current and the entertainment went on.—Racine (Wis.) *Journal*.

## A Couple of Odd Road Experiences.

By R. E. PEARS.

"YES," said the garage manager, "I certainly *have* had a few queer experiences on the road, but most of them are forgotten very soon after they occur. All sorts of things happen when one is touring, and it sometimes depends altogether on a man's mechanical ability whether he gets through on four wheels and under his own power, or has to take to the rails or be towed. I don't mean to say, of course, that our car is one of the kind that is always getting into trouble," he added, hastily. "Most of our tie-ups, you understand, are caused by unavoidable accidents and tire troubles."

The technical man intimated that he understood.

"I remember one time," continued the garage manager, "we were touring in the mountains, and the roads were villainous, and played the devil with our tires. One front tire in particular seemed to be hoodooed, for though we had no less than five extra inner tubes along, every one was practically destroyed after a few miles' running, and we were finally hung up 'way out in the woods, thirty miles from the nearest town.

"We were right up against it, and as no one had anything else to suggest, I got busy and worked out a weird and wonderful repair. We happened to have a short piece of extremely heavy rope among our supplies, and the sight of this gave me an idea. I removed the last of the inner tubes and put the rope around the rim so that it acted as a sort of core for the tire. Then the shoe was put on; but instead of being applied

in the usual way, the edges were brought over the outside of the rim. A lot of holes were punched in the edges of the shoe and it was laced tightly in place with strong cord. As a further precaution, we stuffed a whole stack of straw into the shoe, so that it acted as a cushion.

"Well, sir, I thought the boys would die laughing at my job. I don't know that I blame them, for it wasn't exactly what you would call handsome. The old shoe was all lumps and bulges, and hadn't any particular shape; and the lacing didn't add much to its beauty. But the crowning feature was the straw. I hadn't time to be very particular, and the straw stuck out in all directions from under the shoe.

"Do you remember the scarecrow in the 'Wizard of Oz'?" Well, it made the machine look just like an automobile edition of the scarecrow. But we got in and started, and actually got to our destination, thirty miles away, without any more tire trouble; of course, the arrangement was like a hard, solid tire.

"At every turn of the wheel some of the straw would fly out, and every bit that escaped made the tire a little slacker, and more came out next time. We left a well-marked trail of straw for the whole thirty miles, and by the time we stopped there wasn't enough straw in the tire to show which way the wind was blowing.

"The boys laugh at the 'scarecrow tire repair' to this day; but what's the odds? we got there."

"By the way," continued the garage manager, as a man entered the door, "here



RALPH MONGINI AT THE WHEEL OF THE MATHESON 40 HORSE-POWER CAR NO. 3, IN THE ELIMINATION TRIALS.

comes a man who can tell you about any amount of road experiences. He spends most of his time when he is touring lying on his back under his car."

Then, addressing the newcomer, "Say, you ought to be able to give some valuable information about road repairs. You sometimes have troubles of your own on the road, don't you?"

The automobilist smiled genially. "Trouble?" he ejaculated, "no, I never have anything but tire troubles."

There was a deep, heavy silence for a moment, and the technical man very quietly took his departure. And as he went out he noticed that the new arrival had two spots of oil and a large patch of dust on the back of his coat.

\* \* \*

"Talk about hard luck," said the suburbanite, "I think my last experience was one of the worst that ever happened; but it taught me a useful lesson. I have been running my little car for a long time, and though I have had occasional troubles, nothing has ever happened to endanger life or limb.

"For a long time I have been trying to convince a certain old gentleman of my acquaintance that these new-fangled rigs are not man-killers; and I had tried time after time to get him to go for a ride in my runabout. He always refused politely, but very firmly.

"One fine Sunday morning, however, the old gentleman astonished me by accepting my invitation. I made my few preparations, the old gentleman climbed into the seat and we started. He did not say much, but he enjoyed it hugely after he got used to the speed and the quick steering.

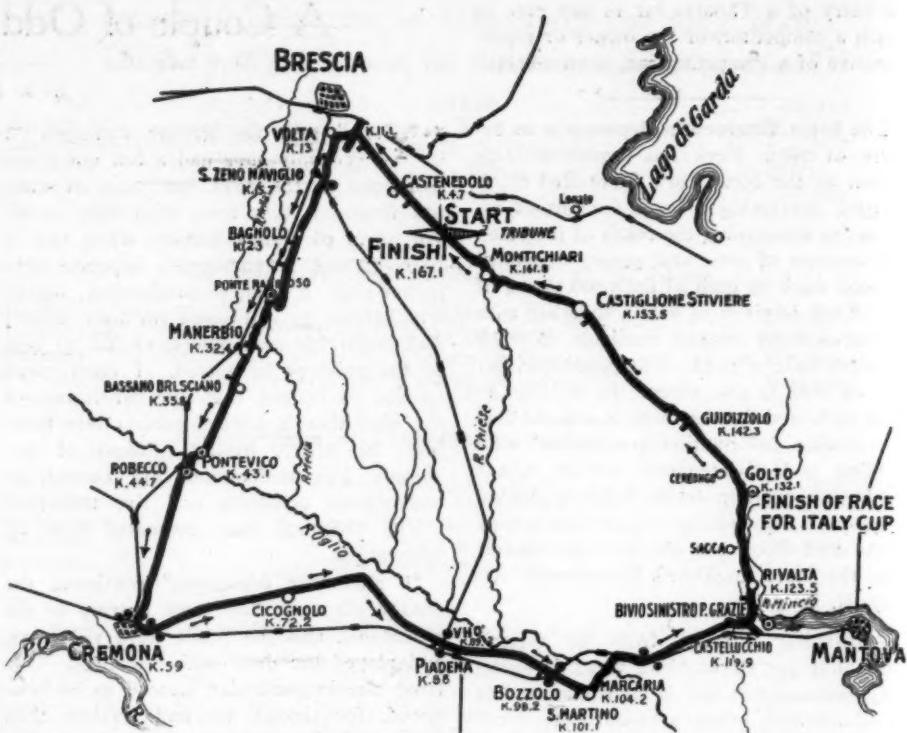
"That's an interesting point—I mean about the steering. Take a man who has handled horses all his life, and it takes him quite a while to get used to the way an automobile will run close to a wagon or anything and then quickly swerve clear.

"The slow, long turns of a horse-drawn rig were in the old man's thoughts, and more than once he would suggest, 'Say, Mac, ain't you a little bit close to that rig?' He soon caught on, though, and the ride that was only intended for a few blocks long spun out until we had covered nearly ten miles before we turned toward home.

"We were within half a mile of my house when it became necessary to send the car across a rather high trolley track, which I proceeded to do, as I had done dozens of times before, at a very moderate speed.

"Just as the front wheel went over the last rail something snapped, and all at once the front end of the car, on the old man's side went down and the left wheel rolled away by itself. The end of the axle dug into the ground, and the aged passenger was chucked out head foremost.

"He grabbed the front fender as he fell and tried to hang on, but the car still had a little momentum, and the rear wheel ran up on his legs and pulled him away from



SKETCH MAP OF THE BRESCIA CIRCUIT IN ITALY OVER WHICH THE FLORIO AND ITALY CUPS WERE CONTESTED FOR.

the fender and ran over the whole length of his body.

"I had a good grip on the gear lever, and so avoided being thrown out. I rushed to my passenger and found him gathering himself together in a slow, dazed sort of way. Fortunately, the old chap was not badly hurt, having only a few scratches and a wrenched shoulder, which he got trying to hang on to the fender.

"I was so upset about the old man that I forgot the car for the moment; but as soon as I knew he was all right, I picked up the front wheel and found that the axle stub had broken off short close to the knuckle.

"There were no cabs in the little town, and as I didn't want to take the chance of letting my unfortunate old friend walk home, I went to a nearby house and telephoned to a garage, only a few blocks away, for a new stub and knuckle. They arrived in fifteen minutes, and in twenty minutes more the car was on four wheels.

"All this time the old gentleman never said a word unless I asked him something; and he quietly got into the car and let me drive him home. He's all right now; I went round to see him every day for a while, but I never so much as said 'automobile,' and neither did he. The subject is too delicate to handle, just at present.

"I learned my lesson, however, when I came to examine the broken stub. I had bought the machine second-hand; the first owner had let the bearings of the wheels get into such shape that deep grooves were cut into the axle ends. I suppose there was a reduction of diameter of nearly one-quarter of an inch, and the grooves were sharp. No wonder, then, that the metal let go. I

said a few things to myself about my carelessness and examined the other front axle bearing, and found it in the same condition.

"Before the machine went out again, I had a complete set of new stubs and knuckles in place. The broken stub showed crystallization, but it would not have let go when it did if it had not been for the grooving.

"Thank goodness, hardly anyone saw the smash; if there had been the usual crowd, they would have blamed it on the automobile, of course; whereas, it was entirely my fault for letting it run in such a condition. It's a wonder to me that the axle stood what it did before it finally fell down."

**Westrumite** is to be manufactured in this country in a factory to be erected in the West. Westrumite is a compound invented by a German, Henry Von Westrum, which was used to lay the dust in last year's James Gordon Bennett Cup race, held in Germany. The compound is made up of crude oil, ammonia, and other ingredients, which permit it to mix with water. The only objection to its use is the fact that it has to be applied frequently where there is much traffic.—*New York Herald*.

In view of the proposed motor car service on Union Pacific branch lines in Nebraska and Kansas, the postoffice authorities have taken steps to utilize the improvement for obtaining better service, says the Omaha *World-Herald*. Mail cars with at least fifteen feet of space for clerks are to be used. A rapid service will be instituted to take the place of that now carried in mixed passenger and freight trains.

## Italy's Great Victory in the Florio Race.

### Itala Cars Win Cups for First Place, Fastest Time and Team Regularity—Raggio, the Winner, an Amateur.

*Especially Reported from the Stand by Our Own Correspondent.*

BRESCIA, NORTHERN ITALY, Sept. 10.—To-day's race over the Brescia circuit has been a victory for Italy all along the line. Raggio, on an Itala car, has secured the Florio cup; and the makers of the Itala cars have obtained the Italy cup for the fastest time over the first 300 kilometers, accomplished by Ceirano, and the Count de Salemi cup for regularity of team performance.

The classification for the race is:

1. Raggio (Itala), 4:46:47 2-5.
2. Duray (Dietrich), 4:56:20 4-5.
3. Lancia (Fiat), 4:57:41-5.
4. Hémery (Darracq), 4:58:12.
5. Rougier (Dietrich), 5:12:50 2-5.
6. Nazzaro (Fiat), 5:12:52.
7. Fabry (Itala), 5:18:10 1-5.
8. Wagner (Darracq), 5:19:24-5.
9. Florio (Mercedes), 5:29:11 4-5.
10. Gabriel (Dietrich), 5:33:44 4-5.
11. Terry (Mercedes), 6:21:45.

The Florio Cup was competed for this year for the second time only, having been won for the first time in 1904 on a shorter Brescia circuit of 231 miles by Lancia with a Fiat car. This year the race was run over a triangular circuit having its most northerly point close to the industrial town of Brescia. The exact distance of the circuit is 103.8 miles, which, covered three times, gives a total distance of 311.4 miles. Excepting a little hilly country, where there are grades varying from 3 to 5 per cent., the whole of the circuit is level, with a width varying from 19 to 26 feet. There are straight stretches of road, many of them five miles long without a bend, which would allow of the fastest possible speeds were it not for the dust. Owing to the length of the circuit it was found impossible to tar the whole distance, and the dry

weather, together with the naturally dusty nature of the soil, made this a serious handicap. The circuit had no neutralizations, but at the four grade crossings of Hais, Cremone, San Zeno and Mascaria there were spacing controls of four minutes each. Much work had been done on the roads for months before the race, thanks to which the difficulties of the turns had been minimized. Police arrangements were of a very elaborate order, 4,000 troops being placed on the circuit, barriers being erected

Automobiles in hundreds, and other vehicles in smaller numbers, blocked the road in the eagerness of their passengers to get to the starting point in good time. Four grandstands had been erected on the plain, including the royal stand, and the telegraph, telephone, and ambulance cabins. For five miles from the starting box the road stretches away in one long, straight line, allowing the cars to rush past at their highest speed and giving a perfect view to spectators.

Tampier, the French *chronometreur*, had charge of the timing arrangements, his little wooden cabin being placed right on the starting line. As the starting hour arrived the racers are put into Indian file on the right-hand side of the road, Hémery with the Darracq car being at the head. A sign from Tampier and the Darracq racer was pushed down to the line painted across the



SIGN FOR A TURN BY THE ROADSIDE ON THE BRESCIA CIRCUIT.

at all the points where crowds were likely to gather, the usual warning and danger flags being shown, and very conspicuous posts erected to indicate the most difficult turns.

In addition to the Florio cup, the event included the Italy cup for the fastest time over the first 187 1-2 miles, and the Count de Salemi cup for team competition.

At a very early hour this morning crowds of people were wending their way out to the starting point on the plain of Montichiari, about ten miles from Brescia. All Italy had worked up enthusiasm over this race, and trains from Rome, Milan and other Italian towns brought up crowds.

road. The mechanic cranked the motor, settled himself into his seat, the "un, deux, trois, quatre—allez!" were counted off, and Hémery went away on hearing the last word as coolly as if on an ordinary tour. A few yards down the road the car picked up speed and soon disappeared in the distance going at a rapid rate.

Lancia was the next to start, and a burst of cheering greeted the Italian favorite as he went over the line in fine style. Le Blon, who drove an Italian car, an Isotta-Fraschini, followed four minutes after the first Fiat car. Then Rougier went over with a rush and a cheer from the French section of the crowd. Young Albert Clément, with



GOING FULL SPEED ON THE BRESCIA CIRCUIT IN COMPETITION FOR FLORIO CUP—WON BY RAGGIO IN ITALA CAR.

one of the Bayard Clément cars which ran in the Gordon Bennett eliminatory trials, went away steadily, being greeted affectionately before starting by his father, who warned him to be cautious. The first Itala car to start was the one driven by Ceirano; the Chevalier Florio followed on a Mercedes and received quite an ovation.

In all there were twenty-one starters, the only absentee being an Isotta-Fraschini. The competitors consisted of two Darracq cars, three De Dietrich, two Bayard-Clément, five Fiat, three Itala, one Isotta-Fraschini, and five Mercedes. The last car to leave was a Mercedes, at 7:52 A. M. A new feature of automobile racing was official betting, which began as soon as the last competitor had been sent away.

One had not long to wait for the passage of the first car, for at 7:59 Hémery rushed by finishing his first round. As there can have been no stoppages in the spacing control, his time must have been 1 h. 29 m. 59 s. for the 103.8 miles. Fifteen minutes later Rougier passed, having passed Lancia and Le Blon. Lancia followed three minutes later, and as he went by the grandstand made signs that he had punctured twice. The Itala driven by Ceirano followed Lancia, going terribly fast. Chevalier Florio received loud cheers as he went by in fifth position. Albert Clément stopped when he reached the grandstand. His car appeared to have been damaged on the railway, and although his motor ran well he could make no speed. Gabriel went by very fast in the Dietrich, and was followed very closely by Mariaux, Raggio and Weillschott. Four cars failed to finish the first round—Le Blon (Isotta-Fraschini), Cagno (Fiat), Gasteaux (Mercedes), and Cortese (Mercedes).

At the end of the second round, Rougier, who had started fourth, passed the grandstand first, having passed Hémery and his rival Lancia. Hémery, however, followed him by a few minutes, and Lancia was soon upon the Frenchman's heels. The Itala car driven by Ceirano followed Lancia by eleven minutes. One tire had gone and the car was being run on the rim.

Even when most of the cars had begun their last round little was known as to their relative positions in the race. The French team, with the exception of the Bayard-Clément cars, had certainly shown remarkable speed and it was generally believed that they stood well. The Itala team, however, had shown surprising qualities, and it was evidently going to be a keen struggle between France and Italy. The elaborate telephone and telegraphic connections which had been guaranteed to keep everybody conversant with all that happened on the circuit, had, as on too many previous occasions, failed to work, and at the grandstand speculation was rife. News came through that Weillschott, on a Mercedes, had abandoned, and a few minutes later the telegraph announced that the Itala car driven by Ceirano had broken a wheel,



CHEVALIER FLORIO, DONOR OF CUP, AT WHEEL OF HIS RACING CAR.

owing to running on the rim, and had withdrawn.

At 11:34:12 A. M. Hémery rushed up to the finishing post, the first to start and the first to finish the race. The band started the "Marseillaise," but had hardly got through before it had to change for the Italian national hymn, for Lancia roared past. He had started four minutes after the Darracq champion and finished seven minutes later than he. There was a babel of languages, the Italian element being sure that Lancia would win on control allowances and the Frenchmen being equally certain that Hémery would maintain first place. There were, however, others who had started late in the race and who were still running in very good form. Duraz, Gabriel, Raggio, Nazzaro and Rougier all had chances of winning. Even the officials could give no information, and there was nothing to be done but to wait in uncertainty. And a long wait it was, for only at 5 o'clock did Tampier receive all the documents enabling him to give the net running times of the competitors. Rapidly he made the calculations, and to the surprise of everybody. Raggio, who had 35 minutes spacing control allowance, came out first. Duray (Dietrich) took second position, Lancia (Fiat), third, and Hémery, who was sure he had won the cup, found himself dropped down to fourth position. The wild enthusiasm of the Italians could be excused, for their cars had made a remarkable performance.

Raggio, the winner of the Florio cup, is an amateur driver, and had received his car only six days before the race. Previous to this event he had driven only light cars of 24 horsepower. His victory in such an important race, run at an average speed of 65.19 miles an hour, is thus a brilliant début. His car was equipped with Michelin tires, which lasted through all of the three rounds without a single puncture or blow-out.

Ceirano, who won the Italy cup, also with an Itala car, covered the first 300 kilometers in 2 h. 40 m., giving an average speed of 69.9 miles an hour. Had he been able to replace the burst tire immediately, his wheel would not have broken, and he might have won also the Florio Cup. Ceirano does not figure in the official classification, but his performance is none the less remarkable. Fabry, the third member of the team, used the car which made its first public appearance on the Ardennes circuit last month. There he showed very great speed, being classed seventh on the first round. Sparking troubles prevented him finishing in this event. On the Brescia circuit he also obtained seventh position in the final classification, his time being 5:18:10 1-5, or an average speed of 63.9 miles an hour.

The Itala cars have pressed steel frame, four-cylinder vertical motor with a bore of 180 and stroke of 145 millimeters, developing 112 horsepower, and on the highest speed are capable of attaining 100 miles an hour. There are four speeds with sliding gear, propeller shaft drive and disc clutch; honeycomb radiator and sparking by Simms-Bosch magneto. The cars are built at Turin, but most of the capital is subscribed at Genoa. Since the race, the firm has allotted an agency in Paris, Henry Fournier, an ex-driver in Gordon Bennett and other big road races and the representative of the Hotchkiss and Oldsmobile in France, having taken over the selling part of the business for that country.

**The latest luxury for the automobile is the pillow.** Now when my lady goes out to ride in her motor car she reclines not only on the soft leather cushions with which the seats are upholstered, but also on the soft silk downy affairs which have hitherto been part of the cozy corner, but which now may be observed in the up-to-dateest of motor cars.—*New York Sun*.

## Auto Street Sweeper.

A new automobile road sweeping and watering machine is at present undergoing its official trials by the sanitary department of the Municipality of Paris. As a start it was given the most difficult task that could possibly have been found—namely, to sweep in and around the Central Markets.

Hundreds of market carts, rows of fruit and vegetable stalls, lines of sacks of potatoes drawn up in regimental order, and underfoot heaps of trampled vegetation, amongst which moves the usual noisy crowd of buyers and sellers—such is the scene every morning in and around the Central Markets. All refuse must be cleared away with great rapidity so as not to interfere with the ordinary course of business. Thus a machine was required that would take up little room, move rapidly, turn quickly and dodge around apple stalls and egg baskets without upsetting them.

The F. G. Muller sweeper, constructed by A. Tourand & Cie, of Suresnes, Paris, fulfilled the task in a very satisfactory manner. The machine consists of a chassis carrying a large water tank containing two cubic meters of water, by which the street can be watered before the passing of the brush as well as after; thus no dust whatever is raised. The brush is of the usual type for street sweepers, and covers a width of five and one-half feet. A metal apron completely incloses the brush.

The motive power consists of a two-cylinder, 12-horsepower Vantour gasoline motor, with three speeds and reverse, and giving



AUTOMOBILE STREET SPRINKLING AND SWEEPING MACHINE UNDERGOING OFFICIAL TRIALS, BY THE SANITARY DEPARTMENT IN PARIS.

a speed of  $3\frac{1}{2}$ , 5 and 9 miles an hour. The brush can be made to revolve either with or independently of the movement of the whole machine. One man attends to all the operations of driving, watering and sweeping, the controlling levers being very handily grouped. The total weight of the sweeper when fully loaded is 8,360 pounds.

### CLUB SHOW IS SANCTIONED.

Applications for space in the A. C. A. show to be held in the Sixty-ninth Regiment Armory, New York, next January.

have been coming in at a substantial rate, and already the affair is said to be assured of a representative character.

To avoid embarrassing several prominent exhibitors in relation to shows in other cities the Automobile Club of America has applied for a sanction from the National Association of Automobile Manufacturers. This sanction does not interfere in any way with the "open" character of the show and allows members of the N.A.A.M. to exhibit in the armory without being barred from other sanctioned shows.

In artistic details the Automobile Club intends to make the affair superior to anything ever seen in this country, and the grand exhibition hall will make this possible. The decorations will be uniform and elaborate, and will harmonize well with the whole scheme.

### PLANNING DEWAR TROPHY RACE.

The challenge cup presented by Sir Thomas Dewar for the world's mile record is now up for competition, challenges having been received from Henry Ford and Walter Christie. The race is in the hands of W. J. Morgan as the representative of the donor, and he is planning to obtain the use of the Coney Island Boulevard for a date about October 18. When the official sanction and the use of the road are secured, Mr. Morgan will ask the Long Island Automobile Club to assume the immediate management of the race. The first winner of the cup in Florida last winter, Louis S. Ross, has sold his car and will not defend it.

The conditions of the deed of gift call for a straightaway mile race, held alternately in the South and in the North.

Fifty autos are now owned and in use in Bloomington. The majority of them are run by gasoline power, although there are a number of electric and steam machines.—Decatur (Ill.) *Herald*.



The Stevens-Duryea 20-horsepower touring car for 1906 will be exactly the same, in every detail, as the 1905 machine, the manufacturers stating that they have no fault to find with the original design. The crankcase of the motor is rigidly connected with the transmission gearcase; a multiple-disc clutch, having alternate faces of leather and steel, is placed in the tubular connecting member. The rigid unit thus formed is hung on a three-point suspension. Drive is by propeller shaft. The engraving published herewith gives an excellent idea of the general appearance of the car and its carrying capacity.

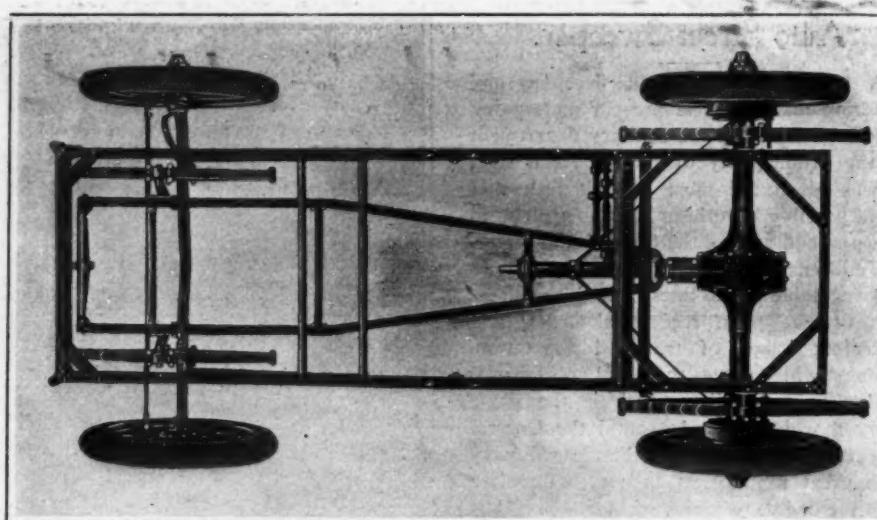
## Marmon Three-Point Frame Suspension.

One of the serious problems that confront the automobile designer is how to avoid the twisting of the frame and the consequent binding of the bearings of the various shafts. Many methods have been adopted, with more or less success, including a number of designs based on the three-point suspension principle. Among these is the arrangement adopted by the Nordyke & Marmon Company, of Indianapolis, Ind., builders of the Marmon air-cooled car.

As will be seen from an inspection of the illustrations herewith, a double three-point suspension is used on this car. The sub-frame, to which is secured the motor and change-speed gearing, is carried at its rear end on two bearings formed on the outside of the "quill" or tube extending forward from the bevel gear casing and inclosing the rear portion of the propeller shaft. Thus the rear end of the sub-frame is free to turn as much as is necessary on the axis of the propeller shaft. The end of the shaft may be seen in the engraving projecting from the end of the quill. The forward end of the sub-frame is carried on two trunnions, one journaled on each of the front springs. The engine and transmission gearcase are attached rigidly to the sub-frame with rigidly connected shafts, there being no universal joints or their equivalent.

The main frame, on which the body of the car is supported, is also supported at three points. The center of the front frame member is pivoted by a longitudinal pivot to the center of the front member of the sub-frame, but is entirely clear of the front springs. The rear end of the main frame is carried on trunnions on the rear springs, exactly as the sub-frame is carried on the front springs. Stout reach-rods are provided to keep the axles in parallel vertical planes.

The manufacturers of the Marmon car state that this system of suspension, in ad-



PLAN VIEW OF MARMON RUNNING GEAR, SHOWING PIVOTAL POINTS OF DOUBLE FRAME.

dition to dispensing with the use of universal joints and obviating twisting and binding of bearings, gives the car extremely easy riding qualities because the wheels are unusually free to rise when an obstruction is encountered. The body is raised only half as high, when the wheels pass over an obstruction of a given height, as would be the case with a car having the ordinary type of frame and suspension. This is illustrated by the accompanying side view, showing two diagonally opposite wheels raised on jacks.

## New Wood Alcohol Process.

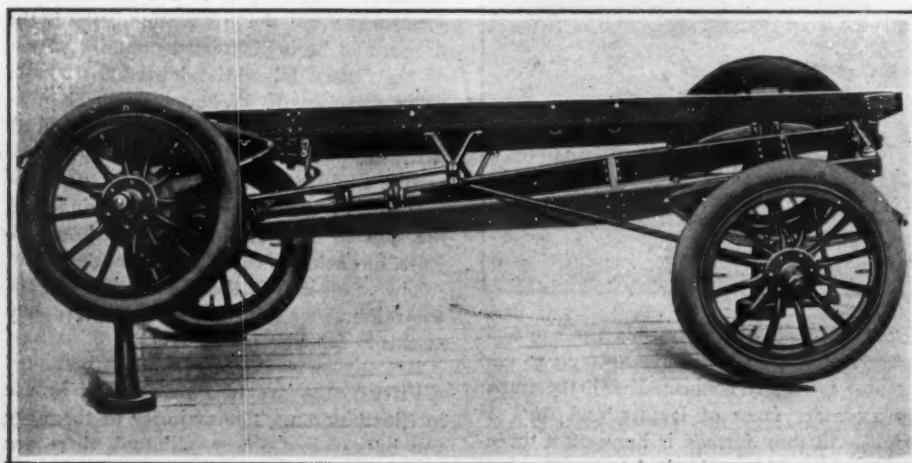
A new process for the production of alcohol from sawdust has been worked out by Professor Alexander Classen, of the Aix-la-Chapelle High School, according to the Engineering Supplement of the London *Times*. Sawdust is treated with a solution of sulphurous-acid gas in water, and the sugar produced by this process, about 85 per cent. of which is fermentable, remains in the sawdust until washed out. From 450 to 500 pounds of sugar can be obtained from a long ton of dry sawdust. The sugar

solution is pumped into a receiving tank, where it is neutralized with carbonate of lime. The next step leads to the fermenting vat, where yeast is added; fermentation commences shortly, and when this process is completed the product passes to still condensers. Here the usual distilling process takes place. The final result is the production of about fifty gallons of crude alcohol, or twenty-five gallons of absolute alcohol, from each long ton of sawdust.

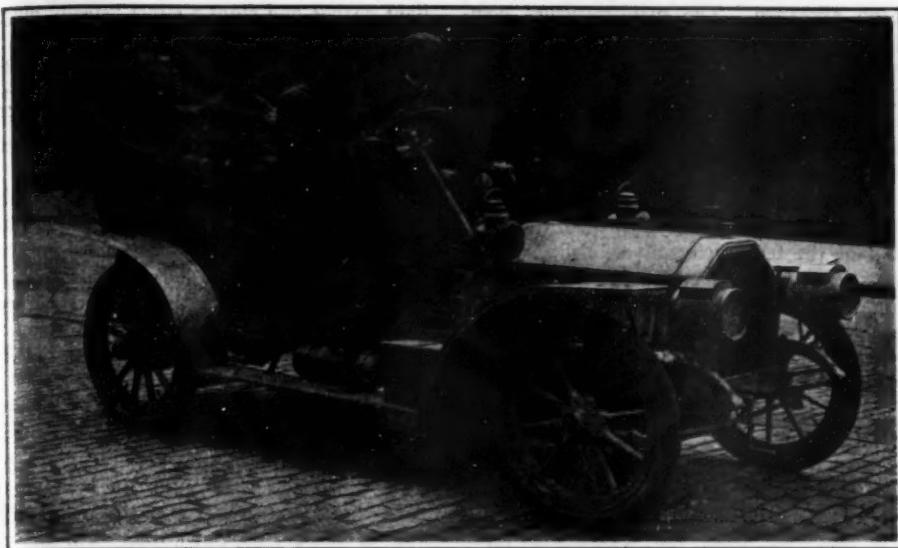
This process would seem to offer a solution of the problem, quite serious in many lumbering centers, as to how sawdust shall be disposed of, if satisfactory arrangements can be made regarding internal revenue. Many experiments have been tried with a view to making some profitable disposal of the enormous quantities of sawdust produced by the big saw-mills, but as a rule the matter does not get beyond the experimental stage. Ottawa, Canada, furnishes a striking example of waste in this respect. The enormous saw-mills at and below the Chaudiere Falls are operated by water-power. For years these mills have been steadily pouring sawdust into the Ottawa river until its bottom and in many places its banks are composed wholly of sawdust, and most of the fish are killed. In making soundings for a bridge across the river a bed of sawdust sixty feet in depth was found. With such enormous quantities of raw material being produced daily, and a market for alcohol at hand, it seems that there is an excellent opportunity for mill owners to benefit themselves and the country at the same time, by distilling alcohol from what otherwise would be worse than wasted.

## Type G Franklin for 1906.

The Franklin light touring car for 1906, designated Type G, has a side entrance body with normal seating capacity for four adults. The regular Franklin four-cylinder air-cooled motor is placed vertically under the hood; it is rated at 12 horsepower, and



MARMON RUNNING GEAR, WITH DIAGONALLY OPPOSITE WHEELS RAISED ON JACKS.



NEW PEERLESS TOURING CAR FOR 1906, CHARLES SCHMIDT AT THE WHEEL.

is said to be capable of driving the car at a maximum speed of thirty-five miles an hour. The car has a wheelbase of 88 inches, and weighs 1,300 pounds. The sliding gear transmission gives three speeds forward; the drive is by propeller shaft and bevel gears to the live rear axle. A disc clutch is fitted.

### Packard and Peerless Models.

The cars shown in the accompanying engravings are 1906 models of the Packard, built by the Packard Motor Car Co., of Detroit, and the Peerless, the product of the Peerless Motor Car Co., of Cleveland. Both are four-cylinder touring cars, with water-cooled vertical motors, and both have shaft and bevel-gear drive and sliding-gear transmission. In outward appearance there is very little difference between the 1906 cars and those of the present year, and the main mechanical features remain unchanged. Improvements have been made in details, however, with a view to increased efficiency and convenience. It is a noteworthy fact that nearly all the 1906 models that have been made public differ but little from last year's machines, the changes being in details rather than in the main features.

### PUBLIC CARS TO ATLANTIC CITY.

#### *Special Correspondence.*

PHILADELPHIA, Sept. 25.—The old days of the coaching trips between the Quaker City and Gotham were forcibly brought to mind last Friday, when the first trip of what is intended to be a tri-weekly Philadelphia-Atlantic City auto 'bus service was successfully accomplished.

The vehicle, which was built by the Mack Motor Car Company, of Allentown, Pa., is of 60 horsepower, weighs 7,700 pounds, and can accommodate fifteen passengers and the operator, with the necessary impedimenta

of the travelers. The car left the Bellevue-Stratford at 9:30 A. M. with a human cargo made up in large part of local newspaper writers. The 62-mile trip to the shore was made in about 5 1-2 hours. Although the car is said to be capable of speeds ranging from 25 to 30 miles an hour, care was taken to keep within the limits provided by the local and state ordinances. The return to this city was made on Saturday.

W. J. Ryan, who will manage this novel venture, believes that the innovation will prove a financial success. The schedule as at present laid out calls for shoreward trips, starting from the Bellevue-Stratford, on Mondays, Wednesdays and Fridays, and return trips on Tuesdays, Thursdays and Saturdays, starting from the Chalfonte.

In the event of stormy weather the huge top, with the side curtains, will afford protection to the passengers.

### BEAUTIFUL VERMONT'S POOR ROADS

#### *Special Correspondence.*

ORWELL, Vt., Sept. 25.—Automobilists touring through Vermont continue to deplore the condition of the roads throughout the State, saying, when questioned, that

Vermont roads are in a far poorer condition than they would have been led to expect in such a beautiful state.

Howard Willson, of Paris, France, who, with a party of friends, has been traveling through Vermont in a 40-horsepower Royal Tourist car, is quoted in an interview published recently in the Burlington *Free Press*, as follows:

"Everywhere we have traveled in the auto we have found much better roads than those over which we have driven in Vermont. In this state we have found the roads not only rough, but in some places so narrow that safe passing of teams was almost impossible."

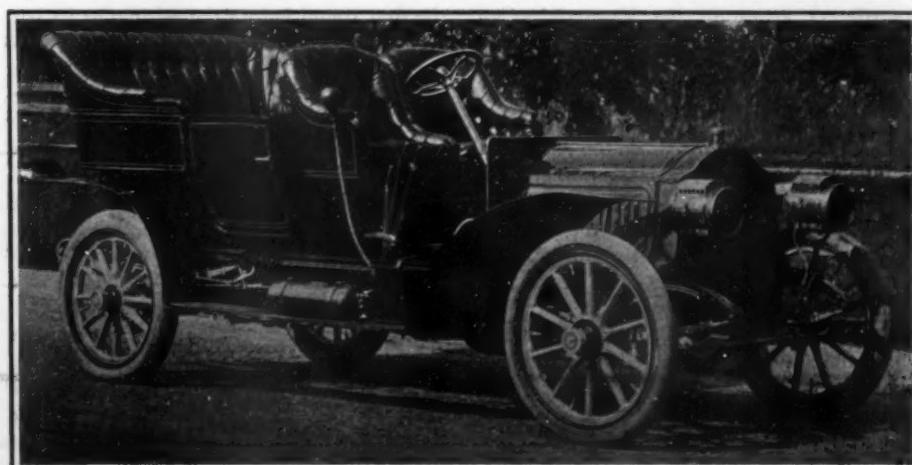
"The people of Vermont themselves seem to be deceived as to the true condition of their roads. Several times we have been told that the roads farther on were in good condition, and have gone on in hope, only to travel over the same old rough and narrow ways. If we were traveling in a Western state, where the resources for road making were limited, we would not expect good roads; but in Vermont such resources are plentiful."

"Vermont is a beautiful state. While in it I have seen some of the most beautiful scenery I have seen in all my travels. It seems a pity that such a state should have such poor roads, not only for automobilists but for everyone else."

### GRAND RAPIDS AUTO CARNIVAL.

#### *Special Correspondence.*

GRAND RAPIDS, MICH., Sept. 23.—The auto derby, to be held in this city next month, promises to be a big automobile event. The exact date has not been set, but it will undoubtedly be early in the month. Entries are coming in rapidly. Barney Oldfield is the star attraction. He has cancelled an engagement at Kansas City in order to be present, and there are several Michigan men looking for his scalp. A dozen Michigan entries have been received up to date. They will compete for the championship of western Michigan. Besides this event, there will be contests between professionals.



PACKARD 1906 TOURING CAR, SHOWING LONG WHEELBASE AND SIDE ENTRANCE.

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**In the Name of Sport.**

In olden days the unsophisticated shell game operator's motto was: "You pay your money and you take your choice." In the present days of high finance, this is considered crude and unscientific, and the motto now reads: "You pay your money and take what you get." Such methods are possibly tolerable in purely commercial transactions, where frequently security is considered an excellent substitute for honor, but are certainly inadmissible in any relation where the ethics of true sportsmanship ought to govern.

These remarks are suggested by the extraordinary action of the Vanderbilt Cup Commission in arbitrarily barring three of the winning cars in last week's trials from participation in the final race. The facts are simply stated. The Commission invited the entry of cars for places on the American team. No structural restrictions other than a maximum weight limit and a few minor points such as the location of the exhaust pipes were imposed, and an entrance fee of \$500 for each car was demanded. Several American builders made entry of cars and paid the fees demanded. Meanwhile, the Commission exercising its right to pick a team either by selection or trial, elected to hold an elimination trial at a certain place and time. Before this trial the cars were to be weighed to ascertain that the stipulated maximum weight had not

been exceeded. The manufacturers complied with the regulations of the Commission in every particular, presented their cars for weighing-in and then and there secured the approval of the Commission after a sub-committee composed of technical members had thoroughly inspected the cars.

The manufacturers brought their cars to the starting line, drove them in the race, and of the ten starters five finished. This was just the number needed to complete the American team, and the owners naturally reposing entire confidence in the good faith and sportsmanship of the Commission, congratulated themselves in obtaining the coveted places.

Their surprise and indignation may be imagined when, at a subsequent meeting of the Commission, on an *ex parte* hearing, the members decided to bar out three of the winning cars from the Vanderbilt race, and, preposterous as it seems, substitute for these three successful cars, three other machines which had started in the elimination trials and failed to qualify.

The Chairman of the Commission in explanation of the high-handed action of that body, said that the members felt that a car which possessed only a speed of say fifty miles an hour, would have little or no chance in the final race, where the speed is likely to be between sixty and seventy miles an hour.

Crediting the members of the Commission with an honest belief, let us see how it bears analysis. In the last Vanderbilt cup race, the winning car averaged only 52.2 miles an hour, though it was capable of a speed faster than any living being could hold it on the road. The low average time was caused by tire troubles. Second place was secured by a car averaging 51.6 miles an hour, which also had stops for repairs. Third place (unofficial) was obtained by an American touring car which averaged only 42.6 miles an hour.

The three cars rejected by the Commission for the 1905 race are the Royal, the Haynes and the Thomas. In the trials on Saturday, the Royal averaged 48.79 miles an hour, the Haynes 47.44 miles an hour, and the Thomas 46.26 miles an hour, and in the first round before the mishap to its battery occurred, the Thomas averaged 54.98 miles an hour. Thus, it will be seen that each of the three cars had a higher average than the American car which last year practically defeated all but two of the picked cars of Europe entered in the race.

It is a fact well known to engineers that the big full-powered cars, though capable of enormous speeds under favorable conditions, are so fined down that luck has a great deal to do with their success or failure. Their construction is really a gamble of science against nature. And at the highest speeds the question of tire endurance becomes very serious. While in the case of the lower-powered cars the factor of safety is larger and the wear on tires considerably less. It is usually a case of brill-

iant dashes and stops against "steady plugging."

This, however, is academic and quite aside from the morality or legality of the Commissioner's action. As we go to press, the aggrieved builders are discussing legal means of redress.

There is another phase of the affair which has apparently been overlooked. The gentlemen most directly concerned in the three cars which have been named by the Commission to replace the winners barred out, are known to be sterling sportsmen. Col. A. A. Pope has been known in his long and intimate relations with sport as a man who has always stood for a square deal, and with Mr. Walter C. White, zeal for pure sportsmanship amounts almost to a passion. We are firmly of the belief that when the offer of the Commission is tendered to these gentlemen, they will indignantly refuse to be made parties to any deal which would steal away from the rightful winners the fruits of their hard-won victories. Mr. Christie has already publicly announced that, yielding to the tender requests of his family, he will not drive his car in a road race, so that as far as he is concerned, the decision of the Commission is an empty "honor."

Since the beginning of the preparations for the Vanderbilt race, the attitude of the Commission has been unfortunate for American interests. At the outset, it brusquely decided to run the race counter-clock wise, in direct opposition to the wishes of a majority of the American drivers. Then, for no stated reason it arbitrarily decided to cut down the length of the elimination trials from ten laps to four. Now it has rendered a decision which has not only outraged the feelings of those who were among its chief supporters in making the trials a success, but has brought the sport of automobile road racing into public disrepute.

**Use of the Auto Horn.**

It is unfortunately true that automobilists, as a rule, are careless and thoughtless in using their signal horns, giving little or no consideration to the matter beyond an occasional squeeze of the bulb when there is someone in the way. The correct use of the horn is a matter of importance, and a certain amount of study and observation is required to obtain the best results with the smallest amount of noise.

The constant sounding of the horn in city streets is unnecessary, for though the streets are filled with vehicles and persons are continually crossing from one side to the other, nearly all are on the lookout for approaching vehicles, and the honk of the horn merely adds an unnecessary and, to many persons, unpleasant note to the din of the street. Yet there are many drivers who keep their horns going almost continuously, producing a noise that is as irritating to

most people as it is useless. These very drivers, however, are apt to be the most careless about giving a signal in country driving when rounding a corner or approaching some place where there may be persons hidden from view. This is the proper time to use the horn—to warn those who cannot see the car approaching, and may be in danger.

The man who overworks his horn in the city is very apt to be lax as to its use when in the country, where sensible signaling is quite as important as in the city. A driver will frequently make the grave mistake of imagining that because he has driven several miles along a straight road without encountering any one, there will be an equally deserted road at the turn, where, perhaps, he cannot see far enough ahead to permit the car to be stopped in case of danger. Judicious signaling is perhaps more necessary in the country than in the city, because the persons who are likely to be encountered on the roads are not usually looking for approaching vehicles, and are more likely to need warning than city people, who are constantly on the alert.

The automobilist should bear in mind the fact that the proper office of the horn is not to sweep the road clear that his car may rush through at unchecked speed, but to warn those who, for any reason, are unaware of possible danger. A careful driver will save much noise and avoid irritating many persons by occasionally reducing his speed slightly rather than sound his horn. If such habits were more general there would be less complaint against the noises of the horn and against the automobile.

#### AUTO STAGE LINE IN CUBA.

##### *Special Correspondence.*

HAVANA, CUBA, Sept. 15.—The first of the new automobile stages which are to be operated between this city and Guanajay was being driven about the streets of Havana yesterday. It will start on its first trip over the Guanajay route Saturday morning, and will make two trips a day to that place, leaving Havana at 7 A. M. and 1 P. M. The fare will be \$1.40 in Spanish silver.

The car is known as the Manhattan, made by Mack Brothers, and is of the same make as several that are being operated as sightseeing cars in New York. The new operating company here is called the Havana Tallyho Company, and its officers are: N. E. Allen, president; Charles E. Todd, vice-president and general manager; George Allen, secretary; A. F. Mack, treasurer, and O. E. Lombard, assistant manager.

#### Jake's Labor-Saving Auto.

Jacob Wainwright has an automobile, as many people in Belleville know. It's not much on looks but it's great on being useful. When Jake and his family get tired of riding around, the machine is taken home, its rear wheels lifted from the ground and placed on a rest, a belt placed around one of the wheels and the other end fixed to a circular saw, and then it's a case of saw wood and say nothing. Saturday Jake succeeded in sawing eight cords of wood with his all-around machine.—*Shelbyville (Ill.) Advocate.*

## AUTO HELD UP NEAR CHICAGO.

#### Highwaymen Shoot After Passing Touring Car on Sheridan Road—Westrumite Being Tried on Chicago Boulevards with Success—Other Local News of Interest.

##### *Special Correspondence.*

CHICAGO, Sept. 23.—Another effort was made to hold up an automobile party last night on Sheridan Road, near Waukegan, and the robbers fired several shots at the occupants of the car after their efforts to stop the machine were foiled. There were four persons in the car—Mr. and Mrs. F. H. Hobarth, of Waukegan; Mrs. Cecil Yates, of Kansas City, and her daughter. They had just descended a high hill near Waukegan when two men ran out of the thick bushes which grow beside the road and attempted to stop the car. Mr. Hobarth, who was driving, tried to stop, but the momentum was too great, and the car shot by the men. They opened fire when the car passed, but fortunately the bullets went wide. The attempted hold-up occurred at the identical place where a car was stopped six weeks ago and the occupants robbed. A Milwaukee electric car was also held up in the same place three months ago. It is thought by the police that those engaged in the affair last night are the same who were in the other robberies. No clue has yet been found to their identity.

An automobile demonstrator, Walter Calkins, was killed early this morning near Kenilworth, on the Sheridan drive, when his heavy touring car collided with a wagon while skidding around a sharp turn in the road. Calkins had been staying at the Hotel Moraine, Highland Park, for three days, and was in the neighborhood for the purpose of exhibiting machines to prospective buyers. He was returning from Chicago with Robert Simons, a clerk of the hotel, when the accident occurred. As there were no policemen or timekeepers in sight, Calkins did not pay any attention to his speed, and tore along at a fast pace. Coming to a sharp turn in the road, he made no effort to check his speed, and took the turn at a fast clip. When it was too late he noticed a wagon in front of him. The huge car skidded, and, striking the side of the wagon with a crash, overturned, pinning Calkins underneath. He was rescued with life almost gone, and hurried to the Evanston hospital, where he died shortly after, despite all the efforts of the physicians.

It is the opinion of Sergeant Ward, the officer in charge of the vehicle bureau, that several persons owning automobiles in the city have attempted to evade the speed law by placing Red Cross insignias on their machines, although they are not physicians. The officers have allowed all cars bearing the red cross to exceed the limit, taking it for granted that they are driven by physicians who are hurrying to the scene of an accident or a sick bed. But such cars have become so numerous that the sergeant has become suspicious. He declared that an effort was being made to discover one of these "fakirs," and that when found he would be prosecuted to the full extent of the law.

The demonstrations of the new compound, which is called Westrumite, on the Midway and the various boulevards around the South parks in the past few weeks, have apparently met with considerable success. The compound, which was invented by a German chemist, settles the dust and makes the road excellent for driving. The

objection at present to its use is that it is necessary to apply it frequently where there is much traffic, which entails considerable expense. In its use the motoring fraternity around Chicago see a bright prospect for racing in the future, as it takes away one of the greatest of the present dangers. It is understood that the compound is to be manufactured in this country and that the factory may be erected in the neighborhood of Chicago.

J. Dixon Chappell, well known as the president of the Woods Motor Vehicle Company, died at his home in this city on Monday morning after a short illness. He was taken with tonsilitis a few days ago, but it was not considered to be dangerous. The funeral took place on Wednesday. Mr. Chappell has lived in Chicago for the past twenty years and was a member of several of the leading clubs.

## LOST IN THE MOUNTAINS.

#### Megargel Flushes Sage Hens on His Way to the Coast.

##### *Special Correspondence.*

RAWLINS, Wyo., Sept. 21.—The *Mountaineer* arrived here last night after a trying experience in the mountains east of Rawlins. The trail along the Union Pacific railroad is a most difficult one to follow, as there is little or no travel at this season of the year, and the ranches and towns are many miles apart. This means that there is no one from whom to ask directions, and a tourist has to go it blind, with a compass as his only guide. The compass gives one the right direction but fails to inform him just where the path will be blocked for miles by a deep washout, a newly-formed pond of alkali mud, or a high rocky peak that cannot be climbed with an auto.

When we left Cheyenne we carried a pair of blankets, and it was well that we did, for after getting lost on the plains several times we did not get into the mountains until almost dark; luckily we had a line of telephone poles to follow. It grew darker and darker as we got up into the mountains, following a trail that had not been used for fully a month. Finally, we commenced to descend a hill so rocky and steep that our brakes would hardly hold the car from rushing to the depths below. Our searchlight failed to show us the telephone line we had set out to follow, and we wandered around for hours trying to find it, realizing that we could not be more than fifteen miles from Laramie, where a good hotel and hot supper awaited us.

It was no use, and shortly before midnight we gave it up, converted the machine into a sleeping car, wrapped ourselves in our dusters, rubber coats and blankets, and turned in for the night. Tourists who have never spent a late September night in the Rockies, where the barometer registered over 7,000 feet, cannot realize how cold that night was; but morning eventually came, and after a half hour's following of our own tracks of the night before we discovered the trail and the long-looked-for telephone poles. Two hours later we pulled into Laramie and enjoyed a combination supper and breakfast that tasted good.

This is the greatest country for game that the writer has ever been in; the ducks and geese that fairly cover every little pond and swamp along the trail would make old hunters leave home. While running west of Laramie, on the Taylor ranch, we ran into a covey of fully one hundred sage hens. These big fowl, almost as large as turkey and far better eating, walked along the ground not a hundred yards away, and kept

walking until we had emptied the magazine of our rifle, killing three; then, with a great flapping of wings, they took flight, sailing low over the sage-covered prairie and settling to the ground again a few yards beyond. Rabbits, both jack and cottontail, scamper out of the thicket on either side of the road as the *Reo* sails along, while coyotes, badgers, foxes and antelope are sighted almost daily.

The ranchers are all glad to see us and to have us put up at their ranches for meals or for the night. Every ranch is a sort of hotel, for they are situated from five to thirty miles apart, and are put down on the state maps, the same as towns are put down on our eastern maps. There is gambling of all styles at every little settlement. The principal game is stud poker, but there is always a roulette wheel and frequently a faro bank on the side. Every saloon in Wyoming, I guess, is equipped with gambling implements, and as soon as cowboy, sheepherder or miner gets his pay he is off to the saloon.

Wyoming is a great sheep-raising country, and the *Reo Mountaineer* occasionally runs through vast flocks of sheep and lambs, numbering well up into the thousands. These sure-footed animals feed on the highest points in the mountains in summer, descending to the valleys for the winter. The herders live in huge covered wagons, in which are stored abundant provisions and fuel for weeks of winter weather.

We ran into some of my old trouble, coal oil for gasoline, at Hanna, a little coal mining town in the heart of the Rockies. I had purchased one five-gallon can of gasoline, paying 40 cents a gallon for it, and emptied it into the *Reo's* tank. The tank still had room for a couple of gallons more, and I asked for some by the gallon. The clerk said there was a can in the storehouse that had been tapped and brought it out. It was marked gasoline plain enough, and when he poured out a gallon I naturally emptied it into the gasoline tank. Just as the last went in I noticed the smell different from gasoline and then stuck my finger in the can, and drawing it out, held it in the air to watch evaporation. Instead of rapidly drying, leaving a white coating on my finger, it positively refused to evaporate, and then I knew.

I figured that one gallon of kerosene mixed with nine gallons of gasoline couldn't make a great amount of trouble, and I was right; for beyond causing a little missing at the start and the adjustment of the carburetors once or twice, it did no harm, I am happy to say, for it certainly would have broken my heart to have allowed those ten gallons at forty a gallon to run out on the ground.

At Hanna we laid in a stock of provisions, and right glad I am, for we have cooked three meals outdoors since when miles away from hotel or ranch. There was a time my stomach would have rebelled from drinking coffee made from water drawn from our radiator, especially as we keep our pump well packed with grease, but it didn't seem to affect the coffee to any extent, not half as much as the fine alkali dust that continually blew into our cups after the coffee had been poured out. Canned salmon, crackers and butter completed our repast.

PERCY F. MEGARTEL.

Simeon Ford's chauffeur ran away with his automobile. The joke is on Simeon, but he doesn't see any material for a funny story.—*Canon City (Col.) Clipper*.

Owners of automobiles say it is a great comfort to meet old horses; old horses do not scare. They've been around, and know nothing is going to hurt them except the driver.—*Farmington (Ill.) Visitor*.

## TRAVELING DISPLAY OF NEW MODELS.

**Railroad Express Car Especially Built and Furnished Will Carry Winton Model K Cars and Parts on Tour of Country for Inspection by Agents.**

### Special Correspondence.

CLEVELAND, Sept. 25.—A novel method of introducing its new models has been adopted by the Winton Motor Carriage Company. The plan will enable it to present its new car for 1906 almost simultaneously to its agents in the leading cities of the country. Within a few days Charles B. Shanks, sales manager of the company, accompanied by assistants, will leave Cleveland on an extended tour, carrying with them the new Model K. The campaign will be carried out by means of a 60-foot express car, designed and built especially for this purpose. In it will be carried the complete exhibit that will be displayed at the shows next winter, including a new model for exhibition purposes, a complete chassis and a car for demonstration.

Mr. Shanks conceived this method of introducing the new season's product, and already it is predicted that another season will see not only more cars of the kind traveling about the country, but complete trains of exhibition cars; that automobile shows will be of this sort instead of being held in large halls.

The exterior of the car bears oil paintings of the Winton factory, the new model and the company's escutcheon. Inside, the whole treatment is white and gold, with green tapestry and flooring. It is brilliantly illuminated with 340 incandescent lamps, and at one end is an office finished in mahogany with rich furnishings. In the exhibition room is a Model K Winton, with royal blue body and ultramarine striping. Beyond this is a specially finished chassis, and at the rear end is the demonstration car. When this is moved from the car the vacant space will be filled by shelves let down and containing parts of the mechanism.

The itinerary is as follows: Detroit, September 26; Buffalo, September 27-28; Rochester, September 29; Boston, September 30 to October 3; Providence, October 4; New York City, October 5 to 8; Philadelphia, October 9 to 11; Pittsburgh, October 12 and 13; Columbus, October 14; Cincinnati, October 15-16; Indianapolis, October 17; St. Louis, October 18-19; Chicago, October 20-22; Milwaukee, October 23; St. Paul and Minneapolis, October 24-25; Omaha, October 26-27; Kansas City, October 28-29; Denver, October 30-31; Sacramento, Salt Lake, San Jose, San Francisco and Los Angeles in order, returning to Cleveland about November 23.

## VANDERBILT AUTO-BOAT RACE

**Trophy Awarded to Boat That Abandoned Contest for an Hour.**

Much amusement was created a month or so since by the formal announcement on the part of the Race Committee of the Seawanhaka Corinthian Yacht Club that Commodore W. K. Vanderbilt, Jr., had offered a cup for a race of "boats driven by international combustion motors." As it proved, no limitation was intended on the make of engine, and the race was in no sense international, but limited only to the various types of gas engines. When finally run, on September 20, though almost under the shadow of Sagamore Hill, it resulted in everything but a "square deal" for the

field, the cup being given to a yacht which violated at least all usages and precedent in yachting, if not the literal rules of this particular club.

The course was from off Lloyd's Neck around the buoy off Matimiccock Point, just under 15 nautical miles, six rounds being run, making 89 nautical miles. The steam yacht *Lavrock*, Vice-Commodore W. J. Matheson, served as committee boat, being anchored at the start, the race being in the hands of F. G. Stewart, of the race committee, and Allan E. Whitman.

The start was given at 12:10 P.M., five boats crossing the line: *Dixie*, *Veritas*, *XPDNC*, *Simplex III*, and *Dart*. The last named, the open tender of the President's yacht *Sylph*, found the water too rough, there being a moderate southwest breeze against the tide, and withdrew on the first round. *XPDNC* led in the first two rounds, with *Dixie* second. At the end of the second round *Dixie* withdrew, her helmsman signaling as he passed the committee boat that the water was too rough. On the third round *Veritas* was disabled, and a heated bearing compelled *XPDNC* to withdraw, leaving only the little *Simplex III* struggling alone.

About an hour after she had withdrawn and gone into the club float a couple of miles away, *Dixie* ran out again with E. R. Thomas aboard and transferred him to the steam yacht *Taro*, owned by his cousin, O. F. Thomas; then, to the surprise of everyone, she cut into the course and resumed the race against *Simplex III*. On the return from this round she ran over to the *Taro* and Mr. Thomas was taken on board, his life preserver was strapped on, and he took the wheel, steering for the three remaining rounds. The turn of the tide had made the water much smoother, and *Dixie* was able to cover the rounds in about 40 minutes each. On one round *Simplex III* passed on the wrong side of a buoy, which by all established usage should have disqualified her, but she was allowed to continue in the race. *Dixie* was timed regularly by the committee, no attention being paid to the fact that she had withdrawn from the race, tied up at a float and changed her crew; she was officially timed as finishing at 5:12:23 and *Simplex III* at 5:37:24, the cup being awarded to Mr. Thomas.

As a plain matter of fact, no race was actually made. *Dart*, *Veritas* and *XPDNC* withdrew, as did *Dixie*; and *Simplex* did not run the proper course, so she should have been disqualified and the race run anew. Under the circumstances, Messrs. Smith & Mabley did not protest *Dixie*, as the Vanderbilt cup stays in the S. & M. family; but it is a nice question whether the owners of *Veritas* and *XPDNC* have not a right to protest the award of the cup on the ground that *Dixie* abandoned the race after the second round and was no longer a contestant, and also that she changed her crew after the preparatory signal.

Commodore Vanderbilt was not present, but it would be interesting to know whether this disposition of his cup meets with his approval, either as an encouragement to sport or as a precedent in race management.

Charles W. King, one of the leading Chicopee druggists, is having all kinds of trouble as a result of having lost his automobile number. The latter has been found and used to advantage throughout the eastern part of the state during the past week. As the finder of the number is traveling under false colors, he is making a record as a speed merchant which is bringing all kinds of medals to Mr. King in the way of summonses to appear in certain places for overspeeding.—*Springfield (Mass.) Republican*.



## NEW DETROIT CLUB HOUSE.

Reached by Thirty-Mile Drive to Pine Lake in the Woods.

*Special Correspondence.*

DETROIT, Sept. 23.—The Automobile Club of Detroit, which is a very live and active body, at present under the administration of President Edwin S. George and his board of directors, has erected a clubhouse thirty miles away from the rush and noise of the city, and the member who "drops over to the club" for dinner finds himself on the shore of a lake with a forest behind him. Here he can sit on the wide porches and enjoy an excellent dinner while his eyes feast on the beauties of nature.

The run from the city to the clubhouse can be made easily in about an hour and a half, and the occupants of the car alight with an appetite prepared to do justice to the good meal they know awaits them.

Pine Lake, on whose shore the clubhouse is situated, is four miles from Pontiac. A number of handsome summer homes are scattered along the shore, the one nearest to the clubhouse being quarter of a mile away.

The route from the city is an easy one to follow. Starting on Woodward avenue it is a straight road to Pontiac, twenty-five miles away. The asphalt pavement leads to the city limits, past the state fair grounds, and then macadam and gravel offers a chance to "let 'er out" for a few miles. The few slight hills serve only as an appetizer for the motor and make level stretches more enjoyable. A toll charge of sixteen cents is made at the first tollgate, and the driver receives four tickets to be distributed at the remaining gates. The keepers of these gates have become dexterous in catching tickets on the fly, so it is not necessary to stop when passing them. The outstretched hand of the guardian of the gates catches the ticket from the occupant of the car and then waves cheerily while the breeze wafts a word of greeting. The gatekeeper knows that the good road has put the motorist in good humor, and the pleasant greeting is met with a like response from the car.

The quiet and repose of the peaceful village of Birmingham, nine miles out, must not be disturbed, so the village fathers have erected huge signs telling that the speed limit is six miles an hour. As the village is quite small, the slackening of speed to obey this mandate is hardly noticeable, and soon a stretch of wide level gravel road offers opportunity to make up for time lost in the town.

Entering Pontiac on Saginaw street, a turn to the left is made at Orchard Lake avenue, just before reaching the business part of town. The distinguishing landmarks at the turn are a saloon on one corner and a blacksmith shop on the other. Another tollkeeper at the city limits exacts a nickel, but the motorist feels that the twenty-one cents has been well expended. Five miles over this winding road, with its beautiful wooded scenery, brings the autoists to Pine Lake. A fork in the road, with a tree and a triangular grass plot and a house on the left, should be sufficient guidance for the stranger. Turn to the left here, and it is only a short distance to the clubhouse.

The return trip can be made by going around the lake, passing Orchard Lake, and getting back to Woodward avenue. This

is a shorter route, and of course can be used on the outgoing journey, unless one wishes to get the full benefit of the run as given above.

## "WATERMELON RUN" IN TEXAS.

*Special Correspondence.*

HOUSTON, TEX., Sept. 23.—Something entirely new in the way of auto runs was participated in recently by members of the Houston Automobile Club. Arrangements for the affair were in charge of C. L. Bering, chairman of the entertainment committee, who is famed for his ingenuity in devising novel and surprising forms of entertainment.

The affair was termed a "Watermelon Run," and more than a dozen cars participated in the event. Luscious melons had been distributed along the road between Houston and Deepwater, seventeen miles distant, placed in such a way as to be not too easily found, and the fun was in finding the melons on the run. After all the fruit had been picked up, the party continued to Deepwater, where they feasted royally on their finds. At a late hour, the start for home was made, and the happy singing and merry laughter of the autoists was all the evidence required to prove the success of the novel run.

## WASHINGTON CLUB FINDS QUARTERS.

*Special Correspondence.*

WASHINGTON, D. C., Sept. 23.—Washington has at last an automobile club worthy of the name, permanent organization of the Washington Automobile Club having been perfected during the past week. The following officers have been elected: President, W. S. Duvall; vice-president, C. E. Wood; secretary, Leroy Mark; treasurer, H. B. Willson; captain, R. B. Caverly; lieutenant, Frank H. Edmonds; board of governors, F. B. Pyle, Fulton R. Gordon, F. H. Edmonds and Burr N. Edwards.

Sixty persons have been enrolled as charter members and there are nearly 200 applications for membership pending. The club begins its career with a comfortable sum in the treasury. It will open quarters at the Villa Flora Club on October 9, with a rousing festival. Captain Caverly is planning a number of club runs, the first of which will be held October 14, when the members will drive their cars to the Hagerstown, Md., county fair.

## MILWAUKEE CLUB FOR DEFENSE.

*Special Correspondence.*

MILWAUKEE, Sept. 23.—At a regular meeting of the Milwaukee Automobile Club, held Friday evening, a communication was read from an automobilist residing in the interior of the state, who had been incarcerated for the violation of a section of the state auto law. He asked for the financial as well as the moral support of the club. The matter was fully discussed, and on the recommendation of James T. Drought, the secretary, it was decided not to establish the precedent of assisting anyone who might be arrested for the violation of the law, for the reason that a step of this kind would have a tendency to encourage fast driving upon the highways.

In this connection the matter of taking action calculated to preclude the possibility

of any further outrages being perpetrated against automobilists by farmers who are prejudiced against the automobile and those who ride in them, was also given consideration, with the result that any automobilist who is the object of an unprovoked attack will be given the support of the club. Recent lawlessness of the wild west variety, including the use of pitchforks and shooting from ambush at automobilists, was the incentive for this action.

The following persons were elected to membership: Robert G. Wagner, William H. Davey, J. C. Baird, Alex. E. Reffauf, J. R. Berthelet, Charles D. Munson, E. W. Frost and George F. Cremer.

## NEWS NOTES OF THE CLUBS.

MINNEAPOLIS.—There is a strong movement on foot among the Minnesota autoists to form a State association which can become a member of the A. A. A. Asa Paine, vice-president of the Minneapolis Automobile Club, and president of the Florida East Coast Automobile Association, has received a letter from A. G. Batchelder, secretary of the American Automobile Association, requesting him to secure the organization of a State association. Many of the autoists of the State believe that the time has come when they should be united in an attempt to secure better roads and concerted action against restrictive and unjust legislation.

CHICAGO.—The directors of the Chicago A. C. met last Friday at the clubhouse in their regular monthly meeting, and appointed a nominating committee to name the slate which will be voted on at the annual election in November. The committee consists of W. L. Lloyd, Frank X. Madd and Donald Sage, who will report within ten days. Fourteen applications for membership were also favorably acted upon at the meeting. Owing to the increased membership list and the correspondingly large attendance at the club café, it has become necessary to increase the accommodations, and the space devoted to the café has been enlarged and redecorated.

SAN FRANCISCO.—The A. C. of California has just sent out a final appeal in behalf of the fund for the new road out of San Francisco. There has been collected already \$27,000 of the \$35,000 necessary, and it is expected that the additional \$8,000 will be received within a fortnight. It is planned to begin work on the boulevard October 1. It will take about sixty days.

PHILADELPHIA.—The new quarters of the A. C. of Philadelphia are taking on their usual appearance of activity with the close of the vacation season. The club's membership is now so near the 300 mark that next month's admissions will surely result in the total passing that figure. The various committees are already hard at work, and arrangements are being made for a lecture on some topic of interest to the members at the next meeting, on October 3. Entries for the cross-country run for the Brazier cup will close about October 1<sup>st</sup> and already the list of entrants exceeds that of last year. A hill-climbing contest, open only to members, is also on the tapis.

## Syracuse Tipplers' Special.

Syracuse, N. Y., has a real "hurry-up wagon," in which plain drunks are carried to safe-keeping in style. It is an electric patrol wagon, of the Columbia pattern, capable of 70 miles a day. It recently made four calls in forty minutes. It is becoming so popular that old offenders go into this district when expecting to get "pinched."—Peoria (Ill.) *Herald-Transcript*.

September 28, 1905.

## News and Trade Miscellany.

Persons who build automobiles are not necessarily possessed of but a single talent. The baseball team of the Packard Motor Car Co., of Detroit, has won twelve out of thirteen games played this season, and stands at the head of the Detroit Manufacturers' League.

An automobile line has been established in Texas to carry passengers, express and mail from San Angelo to Del Rio, through Lavaca, Christoval and Eldorado. The promoters of the scheme are E. R. Amos and S. W. Brashear, of Prague and Guthrie, O. T., and they have ordered four large machines for the purpose.

An automobile salesroom will shortly be opened by the Astar Company at the northwest corner of Broadway and Forty-eighth street, New York, in which building the company will occupy the store and basement.

Chicago is fast becoming a city of automobile trucks. Many of the larger wholesale houses have recently placed heavy orders for gasoline trucks, prominent among them being such piano houses as Lyon & Healy and the Cable Piano Company. Other representative houses, such as Fuller & Fuller, Brink's Express Company and Wouter's Laundry Company have also purchased trucks. Not to be left behind in the march of progress, the Chicago Public library has installed the automobile in its stables.

The Gabriel Horn Company, of Cleveland, have recently removed to larger and more desirable quarters at 970 Hamilton Street. This removal was necessitated because of the inadequacy of the old quarters to properly take care of the increasing business of the company.

A new road map of the State of Pennsylvania, made with special reference to the needs of automobilists, has recently been issued by C. S. Mendenhall, lithographer and wood engraver, 512 Race street, Cincinnati, O. The map of Pennsylvania is put up in the same style as other road maps by the same publisher, being large, but folded to a convenient pocket size, and protected by heavy paper covers. Main touring routes are printed in black and red, and are numbered for reference to the guide book which accompanies the map and gives detailed directions for traveling between the principal towns of the state.

Morgan & Wright, of Chicago, manufacturers of tires and rubber specialties, recently opened two branch establishments. One is located in Boston, at 208 Columbus avenue, and is in charge of Alfred Measure, and the other is in Minneapolis, at 708 Hennepin avenue, in charge of C. S. Marshall.

A new garage recently opened in Springfield, Mass., is that of the Springfield Automobile Company. The building is located at 40 Liberty street, opposite the north entrance to the Union Station, and has a floor space of 11,000 square feet. The garage is fireproof, and modern in every respect.

A new addition to the factory of the Logan Construction Company, Chillicothe, O., is now undergoing construction, and it is expected will be completed by October 20. The new building will be three stories in height, and the dimensions are 45 by 145 feet.

The thirteenth general meeting of the Society of Naval Architects and Marine Engineers will be held in New York City at 10 A. M. Thursday, November 16, the sessions to continue through Thursday and Friday. The meetings will be held in the

Auditorium at 12 West Thirty-first street, and following the business sessions, a banquet will be served at Delmonico's, Fifth avenue and Forty-fourth street, on Friday evening, November 17, at 7 o'clock.

R. M. Owen, sales manager for the Reo Motor Car Company, is at present making an extended trip throughout the West. Before starting, Mr. Owen spent several days at the company's factory at Lansing, Mich.

So great was the number of motor vehicles in line in the big Odd Fellows' pageant in Philadelphia last week that some portions of the line resembled an automobile parade. Every sort of motor vehicle that could be secured—ranging from a two-seated runabout to the huge "Seeing Philadelphia" cars—was pressed into service to accommodate the old Odd Fellows and their women folk who desired to participate in the procession, and each division was represented by a goodly number of automobiles.

Plans for the construction of a \$20,000 garage for the Fawkes Auto Company of Minneapolis have already been accepted and the contract awarded. The building will be three-story, of brick, with a frontage of 150 feet. Mr. Fawkes contemplates equipping it with a modern repair shop, besides a painting department.

The Premier Motor Car Company, Indianapolis, has appointed W. Cosby, of Los Angeles, its agent for Southern California.

The advantages to be gained from handling electric vehicles is depicted in a poster being sent out by the Pope Motor Car Company, Indianapolis. It is styled "Three Sources," and shows how incomes may be derived from storage, sales and maintenance. The poster is illustrated with photographs of the garage of the Standard Automobile Company, Pittsburgh.

The Olds Motor Company, of Lansing, Mich., will be represented on the gridiron this fall. As soon as the Oldsmobile players put up their bats and gloves at the end of the baseball season steps will be taken to form a football team. The baseball team made an excellent record, and the football team is expected to do the same.

Representatives of the Bates Automobile Company, of Lansing, Mich., are said to be seeking another location for the plant. While information is meager concerning the contemplated move, Madison, Wis., is said to be the city in view.

The Buick Motor Company, of Jackson, Mich., is contemplating the establishment of an agency and warehouse at London, England, for the sale of its machines throughout the British Isles. The position of manager of the agency has been tendered W. C. Orrell, of Flint, Mich., and he expects to leave early in October for London and a tour of Great Britain and Ireland in one of the Buick 1906 models. He will be accompanied by C. C. Hyatt, also of Flint.

Nettleton & Co., proprietors of an automobile garage at Coldwater, Mich., are considering a project for manufacturing automobiles on a large scale. They have purchased the automobile belonging to Homer Dickenson, of that city, which was burned near Elkhart, Ind., recently, and are constructing a new car from the remains. This will be called the Phoenix as it rises from the ashes of the old car.

Fred Eaton, a prominent automobile driver of Calumet, Mich., made an attempt to learn how far an automobile could be

driven north from Chicago on the occasion of a return trip from that city recently. He succeeded in getting it as far as Oshkosh, Wis., where he was obliged to take to the railroad. It is possible that other automobile owners in the copper country will attempt thefeat.

A 1906 model four-cylinder Haynes car started from the Kokomo, Ind., factory of the Haynes Automobile Company on September 19, in charge of J. W. Haynes, to make an Eastern tour. Mr. Haynes is a cousin of Elwood Haynes, and had charge of the Haynes exhibit at the St. Louis exposition. He was accompanied part way on the trip by General Manager V. E. Minich, of the company, and Mrs. Minich. The itinerary of the tour is as follows: Toledo, Cleveland, Columbus, Pittsburgh, Erie, Buffalo, Rochester, Syracuse, Utica, Troy, Albany, Worcester, Boston, Providence, Hartford, New Haven, New York, Philadelphia, Wilkes-Barre, Harrisburg, Baltimore and Washington.

Civil suit for \$1,000 damages has been brought against a farmer named Ernest Kell, living nine miles northwest of Racine, Wis., for assault upon Samuel Hanson, a chauffeur, who was driving an automobile occupied by Mrs. Shoop, Mrs. Frances Paddock and Miss Ethel Paddock, besides himself, toward Milwaukee recently, when the party was set upon by Kell and another farmer. The farmers menaced the occupants of the car with pitchforks and used profane language, it was charged, and one of them struck the chauffeur over the head twice with a pitchfork, inflicting painful wounds. Later he was arrested and fined \$25 and costs. The suit for personal injuries followed.

The Manufacturers' Motor Car Co., of New York, has leased a large building at 65 West 43d street and is installing modern machinery for automobile repair work. It will deal in new and second-hand cars of standard makes. Ralph B. Notterton is general manager and L. N. Ellis is secretary.

### RECENT INCORPORATIONS.

Holsman Automobile Company, Chicago; capital stock increased from \$30,000 to \$100,000.

National Auto Sight Seeing Company, Buffalo, N. Y.; capital, \$20,000. Directors: John G. Anderson, Edwin D. Klopp and James R. Pinck.

Newcomb Motor Company, Harrison, Westchester county, New York; capital, \$400,000. Directors: W. A. Newman, J. A. Mooney and T. H. Ferry, New York.

McLean Automobile Company, registered office, East Orange, N. J.; capital stock, \$50,000. Incorporators: Charles L. Beck, Charles A. Green, Joseph Gerrard.

Hotel Gramatin Livery Company, Bronxville, N. Y.; livery, boarding stables and garage; capital, \$5,000. Incorporators: Joseph J. and Joseph Lannin and Thomas L. Doyle.

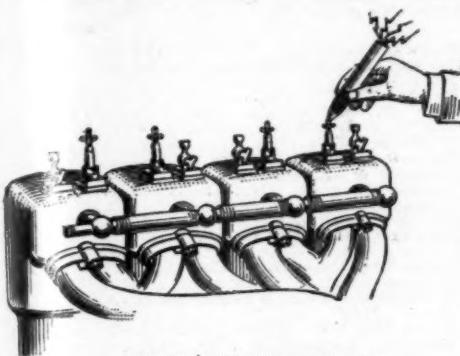
The Auto Association, New York; manufacture and deal in and rent automobiles; capital, \$10,000. Incorporators: Frank J. Griffin, William A. R. Welcke and Patrick F. Griffin, all of New York.

Stoddard-Dayton Agency, New York; manufacture and sell automobiles; capital, \$15,000. Incorporators: Clarence H. Hill, Charles E. Zimmermann, both of New York; James McIlvoid, Jersey City, N. J.

International Guayule Rubber Company, New York; rubber producing; capital, \$50,000. Incorporators: Thomas M. Righter, Mount Carmel, Pa.; John A. Rielly, Shenandoah, Pa.; B. St. John Hoyt, 170 West Seventy-fifth street, New York.

## INFORMATION FOR BUYERS.

**NEW SPARK TESTER.**—Since electrical ignition apparatus on automobile motors is apt to give trouble at times, it has been the aim of many inventors to devise quick and efficient methods of diagnosing and locating trouble; it is well known to practical automobilists that, as a rule, the location of the trouble is more than half the battle. A neat



SMITH'S SPARK TESTER.

little instrument, designed to help the automobilist in discovering ignition faults has been placed on the market by the Duck Brake Co., of 335 Broadway, New York. The accompanying illustration gives an idea of the appearance of the instrument and the method of using it. When a plug is suspected, the tester is placed on it or on any uninsulated part of the high-tension wire leading to that plug. When the engine is turned past the sparking point, a spark will occur in the tube of the tester if a spark occurs at the points of the plug; if the plug does not perform its duty, no spark will be seen in the tester. A very intense spark in the tester indicates an excessive gap between the plug points; and other faults can be located by the proper use of the instrument.

**MILLING MACHINES.**—The catalogue of milling machines recently issued by the Cincinnati Milling Machine Co., of Cincinnati, O., describes and illustrates a number of styles and sizes of this important machine tool. This concern has recently added to its list four sizes of plain milling machines, all designed especially for the quick handling of light pieces. The other machines are intended for heavier work, the largest, No. 5, being capable of handling very heavy work. New attachments have been designed for high number indexing; for back indexing; for milling large cams, and for milling large worm wheels. Millers can be supplied with direct connected electric motors—a method of driving that is finding much favor among manufacturers.

**COMET SPARK PLUG.**—A spark plug that is claimed to be soot proof, has been placed on the market by the Oakes & Dow Co., of 40 Sudbury street, Boston, under the name of the "Comet" plug. So confident are the manufacturers of the qualities of the plug that they guarantee it against sooting for six months. The plug has a mica insulation capped with porcelain at the inner end. The body of the plug is made of brass and is nickel-plated and polished. There is no asbestos packing, and the porcelain is not subjected to unequal strains through expansion when the plug becomes heated.

**NEW ERA PLUG.**—A spark plug designed to overcome a number of the difficulties that beset this indispensable motor accessory, has been brought out by the Gerson-Carey Co., of Lansing, Mich. This plug is made with a double porcelain insulation,

one-half being at the inner end of the plug and the other half at the outer end. The inner porcelain rests against a shoulder on the inside of the shell. The pressure of the explosion and of the compressed charges serves to make the joint tighter, rather than causing it to become leaky. The outer porcelain is held against the opposite side of the same shoulder; a short, heavy spring under the nut at the top of the plug takes care of the unequal expansion of porcelain and through rod. One of the advantages this plug is said to possess is that it can very easily be taken apart for cleaning, and as readily put together again—which will be appreciated by automobilists who have had experience with plugs that would not consent to come apart when they required cleaning.

**TIRE PROTECTOR.**—The device illustrated herewith, intended to protect pneumatic tires from wear and puncture, is called the "Life Preserver," and is manufactured by the Pneumatic Tire Protector Co., of Dayton, O. The protector is made of rubber



TIRE PROTECTOR.

with a corrugated tread three-quarters of an inch thick; on each side are ten ears, projecting toward the center of the wheel, and to each ear is riveted a metal hook. A steel cable passes around and engages with each hook, and the two ends are joined by a turnbuckle, the tightening of which draws the protector down on the tire as closely as may be necessary. The cable is quarter of an inch in diameter. The device is put in place when the tire is deflated, and after inflating the tire, the protector is pulled down with the turnbuckles.

**GLIDE 1906 CAR.**—Though the 1905 automobiling season is not yet over, the Bartholomew Co., of Peoria, Ill., manufacturers of the Glide automobiles, announce the 1906 model Glide touring car. This machine has a four-cylinder vertical motor with 4 1-4-inch bore and 5-inch stroke, rated at 30-horsepower. Drive is through a planetary transmission, propeller shaft and bevel gears to the live rear axle; the transmission gives two forward speeds and reverse, but more speeds can be provided if so ordered. A cellular radiator keeps the water cool. The frame is of the accepted pressed steel type, and the body is hung on semi-elliptic springs in front and full elliptics in the rear. The car has a maximum seating capacity of five persons; the body has side entrances, and the front seats are of the divided pattern. Wheelbase is 103 inches and tread standard. Wheels are 32 inches in dia-

meter, of wood, and are shod with four-inch tires. Steering gear is irreversible.

**B. & S. WRENCHES.**—A catalogue of wrenches, rough, semi-finished and finished, has been issued by the Billings & Spencer Co., of Hartford, Conn., and is of interest to mechanical men. In it may be found illustrations and descriptions of a variety



BILLINGS &amp; SPENCER WRENCH.

of solid wrenches for almost every imaginable purpose, all made from steel drop forgings. In addition to solid wrenches, an adjustable spanner is illustrated and described; it is an extremely simple and useful looking tool, with nothing about it to get out of order.

## NEW TRADE PUBLICATIONS.

**The Adams Co., Dubuque, Iowa.**—Pamphlet giving illustrations of the Adams-Farwell automobile with three-cylinder horizontal motor, with revolving cylinders, and describing some of the performances of the machine. Also folder giving sectional illustrations of various parts of the motor, and different body styles.

**Spicer Universal Joint Mfg. Co., Plainfield, N. J.**—Catalogue of universal joints and slip joints for automobile work. These joints are made in a number of styles, with and without flanges; they are dustproof and the casings are so closely fitted as to retain the light grease which is used as a lubricant.

**Heald Machine Co., Worcester, Mass.**—Pamphlet illustrating and describing the Heald cylinder grinder, a machine designed and constructed especially for finishing cylinders with the greatest possible accuracy and smoothness.

**Hartford Rubber Works Co., Hartford, Conn.**—Pamphlet giving road directions for reaching the various factories of the Hartford Rubber Works and its branches. A lot of good advice is given regarding the care of tires; coming from a tire manufacturer, this ought to be of value to the automobilist.

Official program, score card and guide for the 1905 William K. Vanderbilt, Jr., Cup Race, Long Island, October 14, 1905. Copies of this beautiful souvenir book should be ordered now. On sale October 7, and thereafter. Will be sent, postage paid, on receipt of price (25 cents). **THE AUTOMOBILE**, Flatiron Building, New York.

**The Ideal Machine and Automobile Co., Lebanon, Pa.**, is now conducting a storage and repair station, and in addition carries a line of supplies. J. C. Bowman is manager of the new company.

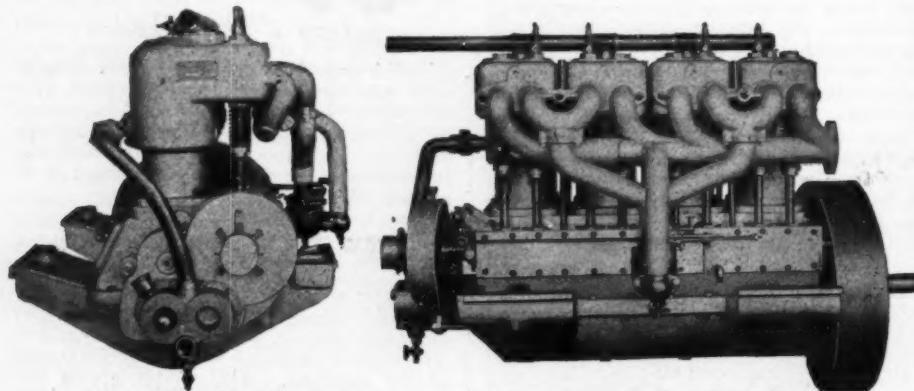
The Automobile Import Co. is the latest addition to the automobile field at Montreal, Canada. The new company will control for the Dominion the sale of the English Humber car.

Harry N. Byfield, a well-known business man of Indianapolis, has acquired an interest in and is now business manager of the Marion Motor Car Company, Indianapolis.

The United States Metal Polish Company, of Indianapolis, of which George W. Hoffman is manager, has just completed a two-story addition to its factory. The addition is 110 by 20 feet, and is located in the rear of the company's main building on East Washington street.

MILWAUKEE MOTOR.—A four-cylinder four-cycle motor rated at 36 horsepower has been placed on the market by the Milwaukee Auto Engine and Supply Co., 708 Winnebago street, Milwaukee, Wis. Fred Lederer, superintendent of this concern, designed the engine. It is stated that the motor is intended for commercial vehicles, large touring cars and auto boats. Its speed can be varied from 150 to 1,600 revolutions a minute, and it is said to be unusually free from vibration and noise. The aluminum crankcase is divided horizontally and joined at the center line; the lower half is divided into four compartments, the

bushings at each end; the big end bearing is split and hinged. Valves have cast iron heads and steel stems; the stems are slotted to take hardened steel keys, which hold in position the aluminum cups which take the ends of the valve springs. Ignition is by jump spark, current being furnished by a magneto. A novelty in the ignition arrangements consists of a set of batteries, a quadruple vibrator coil and a separate timer which can be thrown into action by a switch in case the main ignition outfit fails. The Schebler carbureter is used, and a hood on the end of the air pipe close to the exhaust pipe warms the air supply. A me-



END AND SIDE VIEWS OF MILWAUKEE FOUR-CYLINDER MOTOR.

partitions serving the double purpose of forming an oil pit for each crank, and supporting the intermediate bearings for the crankshaft. Thus there are five main bearings, all of bronze. There are four large openings in the upper half of the crankcase, one over each crank, covered by plates. Each plate is held in place by a single locking handle, and is easily removable without the use of a wrench. Two of the supporting arms on the lower half of the crankcase are provided with reservoirs for cylinder oil, the object being to supply warmed oil for the main bearings in cold weather. The crankshaft is 1 3-4 inches in diameter throughout; the two end cranks are set opposite the two center cranks, so that the explosions, occurring every half revolution, follow each other in the following order: second, first, third, fourth. This arrangement, the manufacturers state, gives very smooth running. The forward end of the crankshaft carries the pinion by which the crankshaft is driven: drives the gear pump direct, and drives the timer; the arrangement of these parts may be seen clearly in the view showing the end of the motor. Cylinders, water jackets, heads and valve chambers are cast integral, each cylinder being a separate casting secured to the crankcase with four studs. Water jackets cover the cylinder barrels below the lowest point reached by the pistons, and extend all around the valve housings. Valves are all mechanically operated; the camshaft, of 7-8 inch steel, runs along the crankcase directly beneath the valves. Cams are pinned to the shaft with taper pins, and the pins are prevented from working out by aluminum rings screwed over them. Pistons are 6 inches long and are fitted with three packing rings each, and have oil grooves for the distribution of the lubricant forced through a pipe entering the side of each cylinder. From these grooves the oil is carried to the hollow wrist-pins and then to the wrist-pin bearings. Wrist-pins are 1 1-8 inches in diameter, of hardened tool steel, and are held in place by set-screws and lock-nuts. Connecting rods are of crucible cast steel, fitted with bronze

mechanical governor controls the speed of the motor within predetermined limits; but this can be cut out when desired.

#### TRADE PUBLICATIONS.

Geo. P. Moore & Co., Incorporated, San Francisco and Los Angeles, Cal.—Catalogue of a variety of high-class automobile specialties, including Witherbee storage batteries, Monogram lubricants, Packard cable, Autocoils, and a complete line of lamps, plugs, horns, clocks, jacks, speed-recording instruments, carbureters, mufflers, and so on.

Oscar Lear Automobile Co., Columbus, O.—Catalogue of the Frayer-Miller automobiles. These cars have air-cooled motors with forced draught through jackets on the cylinders. A Frayer-Miller car won the recent six-day automobile contest at Long Branch, N. J.

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